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# Livestock and Poultry

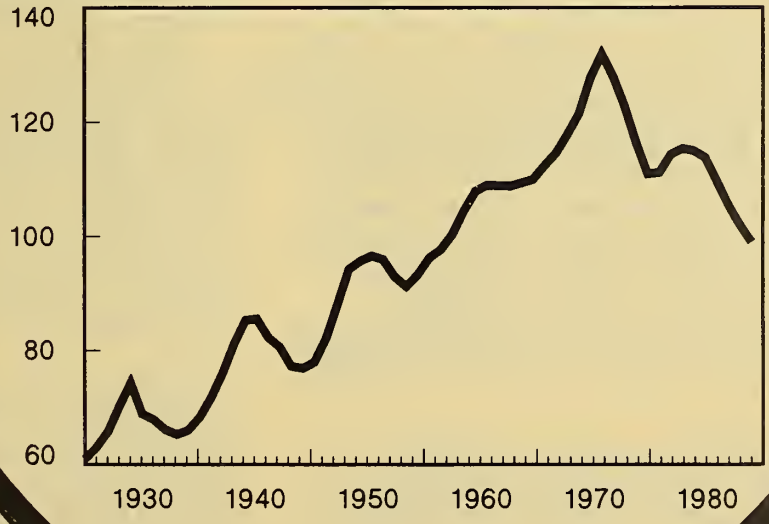
## Situation and Outlook Report

EXCHANGE Rec'd

MAR 8 1988

**U.S. Cattle and Calf Inventory**

Million head





## CONTENTS

### Page

5	Factors Affecting Livestock and Poultry Livestock and Red Meat
7	Cattle
20	Sheep and Lambs
22	Hogs
	Poultry and Eggs
24	Broilers
28	Turkeys
30	Eggs
36	U.S. Poultry Trade
	Special Articles
46	Supply and Utilization Series for Red Meat and Poultry
56	Beef Carcass-to-Retail Conversion Factor Changed
58	Introducing the All Fresh Beef Retail Price
60	List of Tables

### Principal Contributors

Ronald Gustafson (Factors Affecting Livestock  
and Poultry) (202) 786-1285

Steve Reed (Cattle)

Richard Stillman (Sheep and Lambs)

Kevin Bost, Leland Southard (Hogs)

Mark Weimar (Poultry)

Robert Bishop (Eggs)

### Special Articles:

R. Stillman, M. Weimar, and L. Duewer  
(Supply and utilization series)

K. Nelson and L. Duewer

(Beef carcass-to-retail conversion)

Lawrence Duewer (All fresh beef retail price)

### International Livestock and Poultry

Linda Bailey (Livestock)

Lawrence Witucki (Poultry)

### Electronic Word Processing

Erma McCray

Karen A. Rubino

### Statistical Assistant

Polly Cochran (Livestock)(202) 786-1284

Maxine Davis (Poultry)

### Commodity Economics Division

Economic Research Service

U.S. Department of Agriculture

Washington, D.C. 20250

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The present forecasts will be updated if needed in the World Agricultural Supply and Demand Estimates scheduled for release on March 9, 1988.

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## SUMMARY

### *Cattle Inventory Declines; Cattle Prices Rise*

Cattle and calves on farms and ranches on January 1, 1988, totaled 99 million head, down 3 percent from a year earlier and the lowest since 1961. Cow slaughter from beef and dairy herds declined 17 percent in 1987. About 15 percent of the cow herd was slaughtered, and the proportion may fall to around 14 percent in 1988. This is well below the 18-percent rate in 1986, at the height of the Dairy Termination Program.

In spite of reduced cow slaughter, beef and dairy cow herds both declined 2 percent in 1987, due to a low level of heifer retention. During second-half 1987 only 2.4 million heifers calved and entered the cow herd. This was down 35 percent from a year earlier and the second lowest retention rate since the midyear cattle inventory began in 1973. Heifers retained for possible entry into beef and dairy cow herds on January 1, 1988, were unchanged and down 5 percent, respectively, suggesting the cow herd will change little this year in spite of expected reductions in slaughter.

Cattle on feed in the 13 quarterly reporting States on January 1, 1988, were 6 percent above a year earlier, and together with large feedlot placements in January, will hold fed cattle marketings above a year ago in the first half of 1988. The 1987 calf crop was below the midyear estimate and the smallest since 1960. However, the supply of yearling feeder cattle outside feedlots was about

unchanged from a year ago. Thus, feeder cattle supplies, while low, are sufficient to hold fed cattle marketings to only slightly below a year earlier in the second half of 1988.

Higher cattle prices since spring 1987 have provided producers an opportunity to sell more of their cattle to pay down farm debts. Although producers are likely to remain cautious, cow/calf producers had returns above cash costs of nearly \$60 per cow in 1987, with another good year likely in 1988. Returns of \$50 to \$70 per cow and prospects for a good grazing year may encourage more heifer retention this year. Beef production is expected to decline 8 percent from a year earlier in the fourth quarter. However, if retention rates increase, fewer heifers will be available for feedlot placement this summer, resulting in even lower beef supplies in fourth-quarter 1988 and well into 1989.

Beef production is expected to decline 5 percent in 1988, due almost entirely to sharp reductions in nonfed slaughter. Prices for Choice fed steers at Omaha averaged \$64.60 per cwt in 1987, up from near \$58 in 1985 and 1986. Prices this year may average near \$66, but record supplies of competing meats will hold down further gains as lower prices are expected for both pork and poultry.

This issue contains three special articles: Changes in the Supply and Utilization Series for Red Meat and Poultry; Beef Carcass-to-Retail Conversion Factor Changed; and Introducing the All Fresh Beef Retail Price.

Table 1--Livestock, poultry, and egg production and prices  
(All percent changes shown are from a year earlier.)

Item	1986	1987					1988 1/				
	Annual	I	II	III	IV	1/ Annual 1/	I	II	III	IV	Annual

PRODUCTION											
Million pounds											
Beef	24,213	5,755	5,737	6,063	5,852	23,408	5,625	5,600	5,725	5,400	22,350
% change	+3	0	-8	-3	-1	-3	-2	-2	-6	-8	-5
Pork	13,998	3,540	3,325	3,384	4,065	14,314	3,800	3,650	3,800	4,025	15,275
% change	-5	-1	-7	+5	+12	+2	+7	+10	+12	-1	+7
Lamb & mutton	331	76	75	77	80	308	82	78	78	82	320
% change	-6	-16	-4	-5	-2	-7	+8	+4	+1	+3	+4
Veal	509	114	101	100	105	420	100	90	100	110	400
% change	+2	-12	-22	-22	-14	-17	-12	-11	0	+5	-5
Total red meat	39,051	9,485	9,238	9,624	10,102	38,449	9,607	9,418	9,703	9,617	38,345
% change	0	-1	-8	-1	+4	-2	+1	+2	+1	-5	0
Broilers 2/	14,266	3,732	3,910	3,966	3,891	15,498	4,000	4,175	4,150	3,950	16,275
% change	+5	+9	+6	+10	+9	+9	+7	+7	+5	+2	+5
Turkeys 2/	3,133	668	867	1,099	1,081	3,715	790	1,000	1,160	1,150	4,100
% change	+12	+20	+21	+17	+17	+19	+18	+15	+6	+6	+10
Total poultry 3/	17,929	4,533	4,932	5,193	5,106	19,765	4,930	5,330	5,445	5,230	20,935
% change	+6	+10	+9	+11	+11	+10	+9	+8	+5	+2	+6
Total red meat & poultry	56,980	14,018	14,170	14,817	15,208	58,214	14,537	14,748	15,148	14,847	59,280
% change	+2	+3	-3	+3	+6	+2	+4	+4	+2	-2	+2
Million dozen											
Eggs	5,715	1,442	1,438	1,436	1,478	5,796	1,450	1,435	1,415	1,465	5,765
% change	0	+1	+1	+2	+2	+2	+1	0	-2	-1	-1

PRICES											
Dollars per cwt											
Choice steers, Omaha, 900-1100 lb	57.75	60.46	68.60	65.04	64.31	64.60	65-67	64-70	62-68	63-69	63-69
Barrows & gilts, 7 mkts	51.19	48.11	56.18	58.97	43.51	51.69	43-46	42-48	41-47	39-45	41-47
Slaugh. lambs, Ch., San Ang.	69.46	78.05	90.82	72.90	68.36	78.08	78-80	78-84	69-75	68-74	72-78
Cents per pound											
Broilers, 12-city avg. 4/	56.9	50.0	48.2	48.7	42.5	47.4	41-45	41-47	41-47	38-44	40-46
Turkeys, NY 5/	72.2	58.0	56.4	56.2	60.6	57.8	48-52	47-53	52-58	54-60	50-56
Cents per dozen											
Eggs New York 6/	71.1	64.7	58.9	63.5	59.2	61.6	55-59	53-59	60-66	63-69	57-63

1/ Forecast. 2/ Federally inspected. 3/ Includes broilers, turkeys, and mature chickens. 4/ Wholesale weighted average. 5/ Wholesale, 8- to 16-pound young hens. 6/ Cartoned, consumer Grade A large, sales to volume buyers.



## FACTORS AFFECTING LIVESTOCK and POULTRY

The macroeconomic outlook for the next year has become even more uncertain in the last month. While the recovery is now entering its sixth year of expansion, recent economic data indicate that the anticipated slowdown in consumer spending may be more severe than expected earlier. This provides a cautionary note for the meat industry given the record meat supplies expected in 1988. Conversely, real exports increased nearly 13 percent in 1987 with further gains likely in 1988. Rising exports also spurred business plant and equipment spending 0.7 percent, in real terms, in 1987, well above the 2.3-percent decline in 1986.

Consumer spending slowed from 4.2 percent in 1986 to 1.8 percent in 1987. This occurred as nominal per capita income growth slowed from 5.4 percent in 1986 to 4.3 percent. However, the inflation rate increased due to a rebound in energy prices and rising import prices. The Consumer Price Index rose 4.4 percent, up from 1.9 percent in 1986. After removing the effects of inflation, per capita incomes rose only 1.2 percent in 1987, down from 4.0 percent in 1986.

Fourth-quarter statistics also pointed to further slowdowns in consumer spending as business inventories rose sharply. This implies slower production growth leading to a slowdown in consumer purchasing power. In addition, heightened uncertainty may cause consumers to redirect income increases to paying off debt or increasing savings. The savings rate rose from 2.8 percent of disposable income in the third quarter to 4.9 percent in the fourth.

General production costs also are likely to rise modestly in 1988 as the inflation rate notches upward again. Interest rates may average near to slightly above 1987's 8.3-percent prime rate.

### *Grain Stocks Decline; Prices Rise*

Feed grain stocks at the end of 1987/88 are expected to remain large (55 percent of total use), but decline 14 percent from the record carryin levels. Corn stocks on hand December 1, 1987, totaled almost 9.8 billion

bushels, or 540 million less than a year earlier. However, about 6 billion bushels were in the farmer-owned reserve, CCC inventory, or in regular 9-month loans, leaving 3.8 billion uncommitted. With some additional corn placed under loan since last December and projected demand for December-August at 5.6 billion bushels, a lot of corn will have to move into the market in coming months.

While some of the demand will be met through rotation of the farmer-owned reserve, certificate exchanges (CCC catalogue or 9-month producer loan) or cash redemptions will comprise most of the movement into the market. If sufficient certificates are available and the profit margin is attractive, much will be released through certificate exchanges. Otherwise, cash prices will have to move up sufficiently to encourage cash redemptions. The farm price of corn is forecast at \$1.65 to \$1.85 this year, compared with \$1.50 in 1986/87.

While prices this spring and summer will be highly influenced by weather conditions, recently announced farm programs covering crops that will be harvested in 1988 will also have an impact. Idled cropland should remain near 1987's level and just below the record 78 million acres idled in 1983. The mix in idled acres is likely to change. Land bid into the long term Conservation Reserve Program totals about 23 million acres with another signup in progress. However, somewhat offsetting could be a lower level of additional land that may be idled in the paid land diversion (PLD) program.

Program participants for corn, barley and sorghum have the option of idling an additional 10 percent in addition to the 20-percent acreage reduction required to participate in the program. The payment rate for the PLD program will be \$1.75 per bushel for corn, \$1.65 for sorghum, and \$1.40 for barley. In 1987, the payment rate for corn was \$2.00 a bushel and producers could idle an additional 15 percent of their base acreage. The corn target price for 1988 was reduced 10 cents from a year ago to \$2.93 per bushel.

Feed and residual use of corn in 1986/87 rose a surprising 15 percent from a year earlier. Use in 1987/88 is expected to slow but still rise about 4 percent. Corn feed use in



September–November was up 10 percent from a year earlier.

One provision of the Food Security Act of 1985 was more clearly defined in the December Budget Reduction Act. Cropland idled under the programs can be grazed during 7 nongrowing months each year. The land can not be grazed for 5 consecutive months between April 1 and October 31, as designated by the State Agricultural Stabilization and Conservation Service (ASCS) Committee. Haying provisions are still uncertain, and ASCS has indicated that haying will not be allowed except under emergency conditions, unless it is determined that, based on information submitted by a State ASCS Committee, haying will not result in an adverse economic effect in the State. Last year was the first time that idled program acreage could be grazed and much uncertainty existed as to provisions for its use. Since the Conservation Reserve acreage cannot be grazed, about 40 to 50 million acres of land would be available for grazing. This assumes 70 to 80 million acres are idled and the 28-million-acre target for long term retirement is reached in 1988. At present about 62 million acres of cropland pasture are available. Grazing on the idled acres would add about two-thirds more potential acreage of high quality cropland, with a cover crop mandated by law. Already existing pasture and range are being underutilized, but, at the margin, this acreage provides attractive low-cost forage in many areas.

#### *Spring Grazing Prospects*

Small grain and wheat pastures were in generally fair to good condition during January and February. Warmer temperatures in the Southern Plains and Southeast promoted new growth of winter wheat. Below-normal soil moisture levels in Alabama and Georgia cut into winter forage supplies, but hay stocks remain mostly adequate. Areas of Texas also are reporting below-normal rainfall and soil moisture levels this winter. Wheat pasture quality has been affected to some extent, with renewed growth dependent on additional rainfall. Supplemental hay feeding has increased in some regions, with localized supplies becoming short.

Hay stocks on farms on December 1, 1987, totaled 120 million tons, down 2 percent

Table 2 —Hay acreage, production, and stocks

Item	1985	1986	1987	1987/ 1986
		1,000 acres		Percent
Acreage	60,423	62,419	60,748	97
		1,000 tons		
Production	148,601	155,529	149,142	96
Stocks on farms				
May 1	26,853	26,698	32,418	121
December 1	—	121,734	119,749	98

from the 1986 record. The Western States generally held equal or slightly higher hay stocks compared with a year earlier. The Great Plains States varied widely in their stocks inventory. North and South Dakota held about equal inventories, Nebraska and Kansas were down over 20 percent, with Oklahoma down 12, and Texas up 20. The Great Lakes States reported hay inventories down at least 15 percent, while stocks in the Corn Belt States were about unchanged from 1986. In the Eastern Cornbelt and Southeast, hay stocks generally rose. Expected use this winter should reduce current stocks to near the 34 million tons reported last May 1. The decline in hay stocks will be offset by a decline in roughage consuming animal units (RCAU's). RCAU's in 1987/88 are down 3 percent to 78.1 million units from a year earlier.

Hay prices are several dollars higher than a year earlier. All hay prices during January averaged \$62.80 versus \$56.10 in 1986. Alfalfa hay is priced nearly \$8 above January 1986, with grass hay \$4 higher. There may be a valid reason for the increase: A larger percent of the harvested hay may be going into large round bales that are not readily sold in commercial markets because of difficulty in transporting it off-farm. Thus, the baled hay that is sold off-farm may represent a smaller share of total production and is likely a higher-quality product.

January surveys of the mountain snowpack indicate that spring and summer water supplies may fall below normal in the Western States, particularly along the northern tier. Streamflow during the 1988 runoff season could only reach 75 percent of normal. While current conditions remain tentative, and can improve over the next several months, below-normal water supplies



are likely. The water supply outlook is bleakest in the Columbia Basin of the Pacific Northwest where a dry fall season, combined with low snowpack and below-normal reservoir carryover, could create conditions very similar to 1987. Other western States reporting below-normal snowpack include Montana and Wyoming, although near-normal reservoir storage is reported. States expecting near-normal streamflow runoff this spring include Colorado, New Mexico, and eastern Arizona.

## LIVESTOCK AND RED MEATS

### Cattle

Commercial cattle slaughter fell more than 4 percent in 1987 to 35.6 million head. As expected, the decline in slaughter supplies resulted in stronger cattle prices, which averaged nearly \$7 higher for the year. The largest year-to-year declines were recorded in the second quarter when slaughter fell 7 percent, following a 1.5-percent decline in the first quarter. Pork supplies also were lower than expected and fed cattle were bid out of feedlots at lighter weights. Prices advanced \$8 per cwt above the previous quarter and \$14 above the spring-quarter average for 1986.

Cow slaughter showed the largest year-to-year decline--down nearly 17 percent from 1986. The proportion of cows culled from beginning inventories reported on January 1, 1987, fell to 15 percent, compared with 18 percent in 1986. For the year, cow slaughter totaled 18.5 percent of the slaughter mix, down nearly 3 points from a year earlier and the smallest share since 1981.

### Commercial Cattle Slaughter by Class

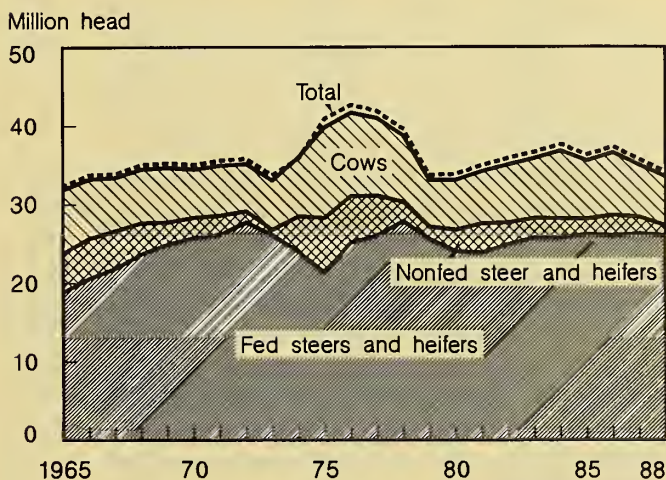


Table 3--Commercial cattle slaughter 1/ and production

Year	Steers and heifers			Cows	Bulls and stags	Total	Dressed weight	Commercial production
	Fed	Nonfed	Total					
1,000 head								
							Pounds	Million pounds
1985								
I	6,678	208	6,886	1,879	171	8,936	637	5,692
II	6,663	540	7,203	1,629	195	9,028	656	5,923
III	6,887	578	7,465	1,691	197	9,353	659	6,167
IV	5,927	664	6,591	2,191	195	8,977	643	5,775
Year	26,155	1,990	28,145	7,390	758	36,293	649	23,557
1986								
I	6,509	325	6,834	1,885	165	8,884	649	5,769
II	6,702	683	7,385	2,006	181	9,572	653	6,246
III	6,745	775	7,520	1,941	191	9,652	651	6,273
IV	6,126	748	6,874	2,129	177	9,180	645	5,925
Year	26,082	2,531	28,613	7,961	714	37,288	649	24,213
1987								
I	6,511	439	6,950	1,651	164	8,765	657	5,756
II	6,477	619	7,096	1,603	179	8,878	646	5,737
III	6,945	460	7,405	1,635	182	9,222	657	6,063
IV	6,330	568	6,898	1,719	166	8,783	666	5,852
Year	26,263	2,086	28,349	6,608	691	35,648	657	23,408

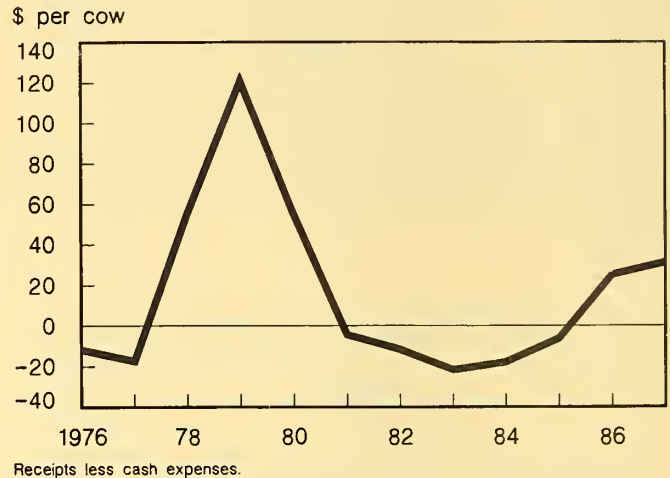
1/ Classes estimated.

Heifer slaughter was down about 2 percent from 1986 while steer slaughter remained unchanged. From the inventory of steers weighing over 500 pounds on January 1, the proportion slaughtered was up 4 percent in 1987 from a year earlier. Heifer slaughter, as a percent of beginning inventories, increased 2 percent from 1986. Steers and heifers on feed on January 1, 1988, in the 13 quarterly reporting States were up 7 and 3 percent, respectively, indicating that a relatively high proportion of beginning inventory animals may again be slaughtered in 1988.

Commercial beef production declined 3 percent in 1987, as record high weights partially offset a 4-percent drop in slaughter. Dressed weights of federally inspected carcasses averaged 662 pounds in 1987, 6 pounds above 1986 and nearly 20 pounds above the previous 5-year average. Heavier carcass weights were likely supported by several factors, including favorable grazing conditions that helped push up in-weights of cattle placed on feed and lower priced feed grains that encouraged heavier finished weights. Also, the sharp decline in cow slaughter translated into a greater share of the slaughter mix coming from heavier weight steers and heifers.

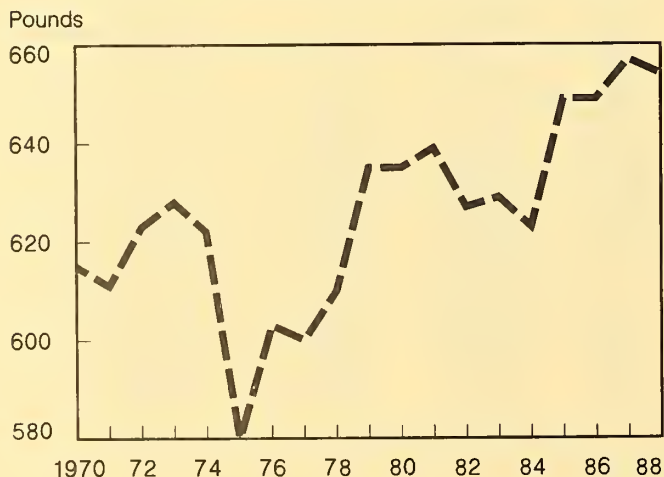
Cow carcasses averaged 529 pounds in 1987, 10 pounds above the 1986 average and nearly 20 above 1985. This shift occurred in spite of a smaller proportion of total cow

## Returns to U.S. Cow-Calf Producers



slaughter coming from dairy cows, which average 300 to 400 pounds heavier than beef cows on a liveweight basis. Improved gains on pasture and ranges, and a larger number of yearling heifers that were pulled out of breeding herds helped push up steer and heifer weights during the fourth quarter. During the first half of 1987, steer and heifer weights averaged 13 pounds below a year earlier. Forage supplies will again be ample during 1988 and should support good pasture gains, heavy feedlot placement weights, and heavy carcass weights. This situation will partially offset further tightening in beef supplies as cattle slaughter is expected to drop another 1.3 million head during 1988.

## Cattle: Average Commercial Dressed Weight



## Cattle Inventory Down

The inventory of all cattle and calves on January 1, 1988, totaled 99 million head, down 3 percent from a year ago and the first time cattle numbers have fallen below 100 million head since 1961. This latest decline marks the sixth consecutive year of falling inventories and a 15-million-head reduction from the most recent cyclical peak in 1982. The inventory of cows and heifers that have calved fell 2 percent to 43 million head, with both the beef and dairy cow inventories declining 2 percent.

Cow inventories declined in 1987 partly because of a slowdown in the rate of heifer retention for brood cow herds. Producers



Table 4--Cattle balance sheet

Year	On farms Jan. 1	Im- ports	Calf crop	Total supply	Slaughter		Death loss	Ex- ports	Disap- pearance	To balance	On farms Dec. 31
					Cattle	Calves					
1,000 head											
1950	77,963	461	34,899	113,323	18,614	10,501	3,742	8	32,865	+1,625	82,083
1951	82,083	239	35,825	118,147	17,084	8,902	3,863	8	29,857	-218	88,072
1952	88,072	140	38,273	126,485	18,625	9,388	4,034	11	32,058	-186	94,241
1953	94,241	198	41,261	135,700	24,465	12,200	4,060	15	40,740	+719	95,679
1954	95,679	86	42,601	138,366	25,889	13,270	4,063	21	43,243	+1,469	96,592
1955	96,592	314	42,112	139,018	26,587	12,864	4,052	35	43,538	+420	95,900
1956	95,900	159	41,376	137,435	27,755	12,999	3,912	37	44,703	+128	92,860
1957	92,860	728	39,905	133,493	27,068	12,353	3,801	44	43,266	+949	91,176
1958	91,176	1,152	38,860	131,188	24,368	9,738	3,810	26	37,942	+76	93,322
1959	93,322	709	38,938	132,969	23,722	8,072	3,876	51	35,721	-1,012	96,236
1960	96,236	663	39,416	136,315	26,029	8,615	4,100	32	38,776	+161	97,700
1961	97,700	1,043	40,180	138,923	26,471	8,080	4,018	24	38,593	+39	100,369
1962	100,369	1,250	41,441	143,060	26,911	7,857	4,125	19	38,912	+340	104,488
1963	104,488	852	42,268	147,608	28,070	7,204	4,040	23	39,337	-368	107,903
1964	107,903	547	43,809	152,259	31,678	7,632	4,232	62	43,604	+345	109,000
1965	109,000	1,128	43,922	154,050	33,171	7,788	4,248	54	45,261	+73	108,862
1966	108,862	1,100	43,537	153,499	34,173	6,863	4,049	35	45,120	+404	108,783
1967	108,783	752	43,803	153,338	34,297	6,110	4,045	55	44,507	+540	109,371
1968	109,371	1,039	44,315	154,725	35,418	5,616	4,012	36	45,082	+372	110,015
1969	110,015	1,042	45,177	156,234	35,573	5,011	4,123	39	44,746	+881	112,369
1970	112,369	1,168	45,871	159,408	35,356	4,203	4,297	88	43,944	-886	114,578
1971	114,578	991	46,738	162,307	35,905	3,825	4,442	93	44,265	-180	117,862
1972	117,862	1,186	47,682	166,730	36,134	3,201	5,126	104	44,565	-626	121,539
1973	121,539	1,039	49,194	171,772	34,102	2,404	6,487	273	43,266	-718	127,788
1974	127,788	568	50,873	179,229	37,353	3,175	6,110	204	46,842	-359	132,028
1975	132,028	389	50,183	182,600	41,464	5,406	6,992	196	54,058	-562	127,980
1976	127,980	984	47,384	176,348	43,199	5,527	5,190	205	54,121	-583	122,810
1977	122,810	1,133	45,931	169,874	42,381	5,692	6,000	107	54,180	+681	116,375
1978	116,375	1,253	43,818	161,446	39,970	4,302	5,800	122	50,194	-388	110,864
1979	110,864	732	42,596	154,192	34,005	2,927	5,600	66	42,598	-352	111,242
1980	111,242	681	44,938	156,861	34,116	2,679	5,413	66	42,274	-236	114,351
1981	114,351	680	44,666	159,697	35,265	2,886	5,059	88	43,298	-955	115,444
1982	115,444	1,005	44,200	160,649	36,158	3,106	5,429	58	44,751	-897	115,001
1983	115,001	921	43,925	159,847	36,974	3,162	5,501	56	45,693	-454	113,700
1984	113,700	753	42,500	156,953	37,892	3,367	5,475	71	46,805	-399	109,749
1985	109,749	836	41,045	151,630	36,593	3,455	5,046	125	45,224	-938	105,468
1986	105,468	1,407	41,141	148,016	37,568	3,478	5,038	108	46,192	+176	102,000
1987	102,000	1,200	40,026	143,226	35,920*	2,900*	4,800*	131	43,751	-481	98,994
1988	98,994										

\*Preliminary.

Table 5--Heifers entering cow herd January-June and July-December

Year	Jan. 1 cow inven- tory	Intended herd re- place- ments Jan. 1	Total 1/ disap- pearance Jan.-June	July 1 cow inven- tory	Heifers enter- ing herd Jan.-June	Percent enter- ing herd	Intended herd re- place- ments July 1	Total 2/ disap- pearance July-Dec.	Jan. 1 cow in- ventory following year	Heifers enter- ing herd July- Dec.	Percent entering herd
1,000 head				Percent		1,000 head		Percent		Percent	
1973	52,553	11,306	3,550	54,037	5,034	44.5	11,144	3,496	54,478	3,937	35.3
1974	54,478	12,134	3,625	57,960	6,107	50.3	11,780	4,702	56,931	4,673	39.7
1975	56,931	12,971	5,212	58,053	6,336	48.8	11,306	7,197	54,971	4,118	36.4
1976	54,971	11,148	5,628	54,938	4,595	41.2	10,475	5,811	52,441	4,314	41.2
1977	52,441	10,414	5,221	52,190	4,970	47.7	9,846	5,429	49,635	2,874	29.2
1978	49,635	9,744	4,961	48,413	3,739	38.4	9,340	4,253	47,852	3,692	39.5
1979	47,852	9,459	3,413	47,815	3,376	35.7	9,885	3,235	47,866	3,286	33.2
1980	47,866	10,101	3,304	49,941	5,379	53.3	10,214	3,748	49,622	3,429	33.6
1981	49,622	10,481	3,599	51,004	4,981	47.5	10,856	3,788	50,216	3,000	27.6
1982	50,216	11,147	3,887	49,990	3,699	33.2	10,900	4,182	48,986	3,178	29.2
1983	48,986	10,881	3,253	49,600	4,499	41.3	10,680	4,447	48,603	3,450	32.3
1984	48,603	10,715	3,859	48,700	4,661	43.5	10,450	4,782	46,174	2,293	21.9
1985	46,174	10,302	3,428	46,300	4,097	39.8	9,900	4,113	44,810	2,625	26.5
1986	44,810	9,910	3,683	45,000	4,526	45.7	9,500	4,293	44,457	3,750	39.5
1987	44,282	9,495	3,697	44,400	3,813	40.2	9,400	3,575	43,266	2,441	26.0
1988	43,266	9,266									

1/ Death loss calculated as 1 percent of January 1 cow inventory plus estimated commercial cow slaughter. 2/ Death loss calculated as 1/2 percent of January 1 cow inventory plus estimated commercial cow slaughter.

indicated in January 1987 that 9.5 million heifers were being held for possible addition to cow herds. However, only 6.3 million head were retained and entered the cow herd. That is a retention rate of 66 percent which is similar to 1984-85, but well below the 1986 rate of 82 percent. During the first half of 1987, only 3.8 million heifers calved and entered the cow herd, the fourth lowest number since the series began in 1973. In the second half of the year, 2.4 million heifers entered the herd, which was the second lowest rate for this period. One reason for the smaller retention rate may be the strong prices recorded during much of 1987 and the willingness of producers to accept immediate cash payments rather than deferring income to the future.

Higher calf and yearling prices made 1987 fairly profitable for cow/calf producers. Average returns per cow above cash costs have been estimated at \$61, compared with \$25 in 1986 and negative returns in 1981 through 1985. The poor returns to the cow/calf sector during the past several years, as well as regional droughts that reduced forage supplies during the 1980's, forced many producers to reduce cow herds.

There are a few signs that the end of the cattle liquidation phase may be nearing. Cow slaughter, as a percent of the beginning inventory, is expected to continue declining in 1988. Heifers being held for replacement in beef cow herds remained about unchanged from 1986, although the decision whether to

breed these heifers will not be made until midyear. Improved returns to cow/calf producers have provided an opportunity to pay down debts and improve the financial base. Thus, a modest increase in heifer retention may begin this breeding season, and stabilize cattle numbers in 1989.

### *Yearling Feeder Cattle Supplies Unchanged*

The 1987 calf crop declined to 40 million head, 1 million below 1986 and the smallest number since 1960. This revised number was down 700,000 head from the June 1, 1987, estimate. Supplies of feeder cattle outside of feedlots and available for stocker operations and feedlot placement were down 6 percent from a year earlier on January 1, 1988. The number of yearlings is about unchanged, but supplies of lighter weight calves are down 10 percent. The wide variation between supplies of yearlings and lighter calves is probably due to a higher percent of the 1987 calf crop moving into the over-500 pound weight grouping on the inventory report. Favorable grass conditions last year likely pushed up weaning weights, thus moving a larger percent of the 1987 calf crop into the heavier weight category.

Additional supplies of feeder cattle could come from Mexico and Canada in 1988. During 1987, imports of feeder cattle and calves from these two countries declined 15 percent, due mainly to a 19-percent reduction

### **Percent of Cow Herd Slaughtered**

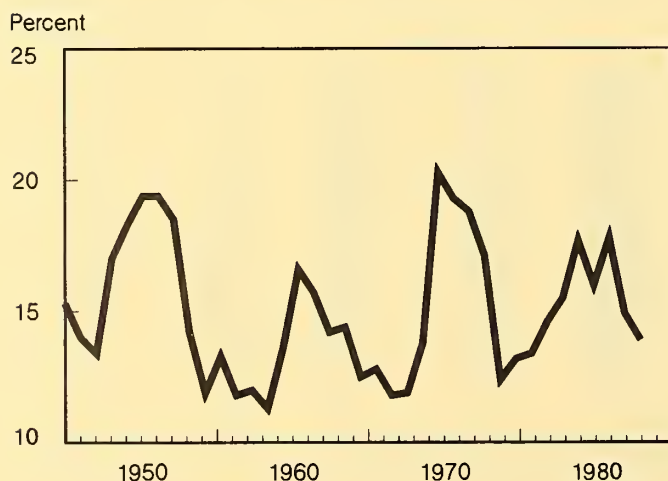


Table 6-Jan. 1 feeder cattle supply

Item	1986	1987	1988	1988/ 1987
	1,000 head			% change
Calves -500 lb				
On farms	24,431	23,154	20,895	-9.8
On feed 1/	409	457	433	-5.3
Total	24,022	22,697	20,462	-9.8
Steers & Heifers				
500 lb + 2/				
On farms	24,057	22,865	23,404	+2.4
On feed 1/	11,026	10,465	11,046	+5.6
Total	13,031	12,400	12,358	-0.3
Total supply	37,053	35,097	32,820	-6.5

1/ Estimated U.S. steers and heifers. 2/ Not including heifers for cow replacements.



Table 7--Imports of feeder cattle and calves and hogs from Canada and Mexico

Year	Feeder cattle and calves		Hogs
	Canada	Mexico	Canada
	Number		
1985			
Jan.	16,447	59,670	184,294
Feb.	32,962	4,416	142,330
Mar.	64,416	4,767	213,490
Apr.	53,996	4,303	89,183
May	34,615	15,684	124,103
June	21,872	26,073	108,799
July	13,124	21,278	108,481
Aug.	13,343	16,105	65,195
Sept.	13,963	16,884	48,421
Oct.	18,039	4,147	37,371
Nov.	28,747	101,638	38,630
Dec.	26,796	201,513	65,854
Total	338,320	476,478	1,226,151
1986			
Jan.	23,604	142,416	70,480
Feb.	27,346	75,302	47,021
Mar.	24,181	77,763	29,067
Apr.	20,536	54,507	33,260
May	21,734	102,787	25,128
June	18,511	41,353	38,926
July	25,485	53,808	81,333
Aug.	18,084	35,650	51,789
Sept.	16,122	20,333	41,133
Oct.	9,404	11,957	32,937
Nov.	13,938	203,827	21,013
Dec.	8,593	336,228	31,628
Total	227,538	1,155,931	503,715
1987			
Jan.	13,615	108,916	48,558
Feb.	19,154	131,631	20,745
Mar.	21,513	134,011	32,206
Apr.	28,569	92,943	47,763
May	27,497	46,567	31,270
June	35,431	95,977	35,143
July	14,568	28,333	40,183
Aug.	13,461	3,419	34,300
Sept.	11,138	12	37,560
Oct.	17,638	0	35,499
Nov.	20,549	4,950	31,787
Dec.	21,577	288,173	50,849
Total	244,710	934,932	445,863

in imports from Mexico. Movement of cattle from Mexico was severely restricted during September–November, with only 4,962 head moving across the border to the United States, compared with 236,117 during the same period in 1986.

Mexico places an export quota on feeder cattle for a September/August marketing year. The announcement of the 1987/88 quota of 980,000 head (down from 1.17 million in 1986/87) was delayed until November 12. Confusion as to which Mexican organization was to distribute the export licenses further delayed the start of cattle exports until

December. Because most of the cattle enter the United States during the first 6 to 8 months of the quota period, imports are likely to be large in early 1988.

Feeder cattle imports from Canada decreased 1 percent during 1987 to 225,000 head. Over the past several years, the number of feeder cattle moving into this country has varied widely. However, a large share of the cattle movement between countries continues to depend on relative price levels. Given the sharp cutbacks in available U.S. feeder cattle supplies, strong demand for cattle from both Canada and Mexico is likely, and may total over 1.5 million head in 1988.

In spite of the potential for larger feeder cattle imports during 1988, tight feeder cattle supplies will keep calf and yearling prices at least comparable with year-earlier levels and possibly much higher during the first half of 1988. Further price strength could occur if cow/calf producers actually breed a larger percent of replacement heifers this season. Current expectations are that heifer retention rates may be much higher in the second half of the year than recorded in either 1986 or 1987. This could remove another 1 million yearling cattle from the available feeder cattle pool.

Cattle prices for yearlings at Kansas City are expected to average in the low \$80's per cwt during the first quarter as supplies remain seasonally tight. As the demand for grass cattle is satisfied later this spring, prices could weaken somewhat. However, prices in the high \$70's still appear likely. Continued price strength into the summer quarter will depend on the degree of profitability within the fed cattle sector during the next several months. Feedlot profits turned negative in December as the first higher-priced feeder cattle placed on feed last summer and fall were marketed.

Additional losses are expected in January and February as breakeven levels are estimated at  $-\$0.32$  and  $-\$1.06$  per cwt, respectively. Favorable returns during most of 1987 have given feedlots a cushion to work with lower profits over the next several months. However, an extended string of negative returns would reduce the demand for relatively high-priced feeder cattle and drive stocker cattle prices lower. Recent prices have been seasonally strong as poor weather

Table 8--Federally inspected cattle slaughter

Week ended	Cattle			Steers			Total			Cows			Dairy/total		
	1986	1987	1988	1986	1987	1988	1986	1987	1988	1986	1987	1988	1986	1987	1988
	Thousands									Percent					
Jan.															
9	757	741	664	343	349	328	189	148	132	79	66	64	42	45	48
16	755	766	722	343	360	358	176	151	127	72	67	63	41	44	50
23	704	707	701	321	336	353	153	124	125	67	61	59	44	49	47
30	669	673	673	308	332	340	143	128	117	62	64	56	43	50	48
Feb.															
6	655	684		307	316		144	135		64	67		44	50	
13	651	621		310	303		122	119		58	59		48	50	
20	638	602		289	292		126	109		59	56		47	51	
27	676	657		318	326		136	121		64	66		47	55	
Mar.															
5	637	678		297	337		130	127		62	68		48	53	
12	638	646		304	311		128	124		61	58		48	47	
19	646	625		305	300		131	111		61	55		47	49	
26	641	616		295	304		135	115		64	58		47	50	
Apr.															
2	669	652		315	328		157	121		89	57		57	47	
9	716	649		354	333		148	114		97	51		65	45	
16	705	681		339	349		137	119		86	52		63	44	
23	719	639		342	330		159	117		92	48		58	41	
30	719	635		334	321		157	118		84	48		53	41	
May															
7	706	630		327	309		149	116		77	46		52	40	
14	731	700		339	348		156	124		74	50		47	37	
21	729	695		334	355		158	131		77	49		49	37	
28	643	612		310	309		136	107		64	43		47	40	
June															
4	720	680		364	351		142	117		66	50		46	43	
11	735	669		375	340		143	115		66	49		46	43	
18	691	649		327	320		140	123		65	49		46	40	
25	731	680		343	339		147	130		69	52		47	40	
July															
2	612	621		289	316		123	109		59	47		48	43	
9	734	652		342	338		149	114		74	51		50	45	
16	746	682		354	339		163	128		75	53		46	41	
23	732	672		346	333		151	121		71	51		47	42	
30	685	676		310	339		148	123		75	56		51	46	
Aug.															
6	723	693		339	335		141	123		71	58		50	47	
13	767	713		361	354		150	124		78	58		52	47	
20	733	692		341	336		147	129		71	63		48	49	
27	718	706		333	341		146	132		74	66		51	50	
Sept															
3	619	690		291	324		116	119		55	54		47	45	
10	734	624		332	293		134	100		59	44		44	44	
17	722	727		352	337		145	122		66	53		46	43	
24	678	677		337	312		143	123		63	56		44	46	
Oct.															
1	694	684		359	324		134	116		62	53		46	46	
8	686	690		342	340		137	120		64	53		47	44	
15	690	696		318	338		150	128		66	55		44	43	
22	688	676		322	319		152	136		61	57		40	42	
29	696	665		325	315		165	140		66	61		40	44	
Nov.															
5	714	649		335	311		165	141		68	59		41	42	
12	671	643		296	301		168	136		73	56		43	41	
19	692	648		313	308		175	141		70	57		40	40	
26	594	576		281	280		133	109		53	46		40	42	
Dec.															
3	685	646		298	305		174	139		74	58		43	42	
10	676	660		302	311		175	140		71	60		41	43	
17	691	638		315	324		170	114		73	51		44	45	
24	512	482		248	242		105	80		46	39		44	49	
31	577	561		274	291		130	86		62	41		48	48	

1/ Corresponding dates to 1988: 1986, Jan. 11; 1987, Jan. 10.



Table 9--13-States cattle on feed, placements, marketings, and other disappearance

Year	On feed 1/	Percent change 2/	Place- ments	Percent change 2/	Fed mar- ketings	Percent change 2/	Other dis- appearance	Percent change 2/
	1,000 head	Percent	1,000 head	Percent	1,000 head	Percent	1,000 head	Percent
1985								
I	10,653	7.3	5,315	-3.4	5,907	3.4	373	2.2
II	9,688	3.7	5,206	-6.5	5,787	3.0	437	-24.9
III	8,670	-3	5,480	-12.3	5,969	5.0	244	-9.0
IV	7,937	-11.8	7,365	-3.0	5,224	-5.1	324	-22.3
Year	---	---	23,366	-6.1	22,887	1.6	1,378	-15.6
1986								
I	9,754	-8.4	5,270	-.8	5,763	-2.4	316	-15.3
II	8,945	-7.7	5,221	-.3	5,821	-.6	375	-14.2
III	7,970	-8.1	6,336	15.6	5,876	-1.6	233	-4.5
IV	8,197	3.3	6,756	-8.3	5,396	3.3	312	-3.7
Year	---	---	23,583	.9	22,856	-.1	1,236	-10.3
1987								
I	9,245	-5.1	5,680	7.8	5,747	-.3	371	17.4
II	8,807	-1.5	5,906	13.1	5,619	-3.5	428	14.1
III	8,666	-8.7	6,590	4.0	6,022	2.5	242	3.9
IV	8,922	9.7	6,698	-.9	5,583	3.5	338	8.3
Year	---	---	24,874	5.5	22,971	.5	1,379	11.6
1988								
I	9,769	5.7			3/ 5,875	2.2		

1/ Beginning of quarter. 2/ Percent change from previous year. 3/ Expected marketings.

Table 10--7-States cattle on feed, placements, and marketings

Year	On feed	Percent change 1/	Net placements	Percent change 1/	Marketings	Percent change 1/	Other dis- appearance	Percent change 1/
	1,000 head	Percent	1,000 head	Percent	1,000 head	Percent	1,000 head	Percent
1986								
Jan.	7,920	-8.3	1,494	+12.2	1,750	-1.8	87	-26.3
Feb.	7,664	-6.4	1,128	-9.5	1,470	-4.5	92	-2.1
Mar.	7,322	-7.2	1,564	+4.7	1,593	+2.2	86	-12.2
Apr.	7,293	-6.8	1,445	+12.6	1,631	+1.7	120	-9.8
May	7,107	-5.3	1,624	+4.9	1,635	+1.9	132	+3.1
June	7,096	-4.8	1,095	-7.5	1,648	+4.5	67	-23.0
July	6,543	-7.3	1,480	+45.5	1,692	+1.3	64	+4.9
Aug.	6,331	-1.1	1,732	+19.6	1,659	-2.2	70	+12.9
Sept.	6,404	+4.0	2,044	+7.1	1,637	+2.1	59	-25.3
Oct.	6,811	+5.4	2,322	-13.8	1,587	+.9	81	-4.7
Nov.	7,546	-.5	1,727	+2.2	1,447	+4.9	87	+14.5
Dec.	7,826	-.8	1,331	-2.8	1,514	+8.6	104	-6.3
1987								
Jan.	7,643	-3.5	1,464	-2.0	1,803	+3.0	127	+46.0
Feb.	7,304	-4.7	1,337	+18.5	1,478	+.5	105	+14.1
Mar.	7,163	-2.2	1,630	+4.2	1,561	-2.0	89	+3.5
Apr.	7,232	-.8	1,542	+6.7	1,541	-5.5	139	15.8
May	7,233	+1.8	1,841	+13.4	1,514	-7.4	143	+8.3
June	7,560	+6.5	1,335	+21.9	1,702	+3.3	87	+29.9
July	7,193	+9.9	1,163	-21.4	1,703	+.7	71	+10.9
Aug.	6,693	+5.7	1,847	+6.6	1,722	+3.8	68	-2.9
Sept.	6,818	+6.5	2,358	+15.4	1,641	-.2	71	+20.3
Oct.	7,535	+10.6	2,519	+8.5	1,690	+6.5	85	+4.9
Nov.	8,364	+10.8	1,506	-12.8	1,458	+.8	103	+18.4
Dec.	8,412	+7.5	1,231	-7.5	1,577	+4.2	119	+14.4
1988								
Jan.	8,066	+5.5	1,549	+5.8	1,759	-2.4	111	-12.6
Feb.	7,856	+7.6						

1/ Percent change is from previous year.

conditions have held down meat supplies, particularly beef, and to a lesser degree pork. Slaughter rates will be increasing over the next several months, thus pressuring meat prices at the retail level.

### *Cattle on Feed*

Fed cattle marketings in the 13 quarterly reporting States reached nearly 23 million head in 1987, slightly higher than 1986 and only 1.3 million head below the 1978 record. The increase in 1987 fed cattle marketings resulted from a 550,000-head decline in nonfed steer and heifer slaughter. Fed cattle slaughter is expected to remain large, but decline about 1 percent in 1988 as tighter feeder cattle supplies at higher prices force some feedlots to operate below peak capacity. Feedlot breakevens on cattle to be marketed during the spring quarter currently exceed \$70 but do not appear to have slowed down placement rates.

Net feedlot placements during January in the 7 monthly reporting States increased 6 percent from 1987, and were the highest since 1974. Cattle on feed on January 1 in the 13 quarterly reporting States were up 6 percent from the previous year, with February 1 inventories on feed in the 7 States up 8 percent. Thus, declines in 1988 feedlot marketings are not expected until current inventories on feed have been slaughtered. The January 1 inventory of lighter weight cattle on feed in the 13-State survey was more in line with previous years and suggests that second-quarter fed cattle supplies will drop seasonally. Still, marketings will remain near year-earlier levels if not slightly higher. During the second half of 1988, tight feeder cattle supplies, at relatively high prices, will likely generate small feedlot profits and could push fed cattle marketings 6 percent below a year earlier.

### *Beef Production in 1988*

Smaller fed cattle supplies and expected declines in both cow and nonfed steer and heifer slaughter could drop beef production 4 to 5 percent in 1988. Lower beef supplies will generally be supportive for prices from the farm gate through the retail level. As in 1987, most of the expected decline in production will come from processing beef supplies rather

than grain fed beef. Fed cattle marketings could decline only about 1 percent this year, while grass-fed slaughter may drop an additional 13 percent. Some reduction in live and dressed weights is expected, although the weights for all classes of slaughter cattle will remain near the record highs of 1987.

The largest year-to-year decline in beef production could come during the fourth quarter as fed cattle marketings may fall below 6 million head, the lowest since fourth-quarter 1985. For the year, fed cattle prices should average \$1 to \$2 above the \$65 average for Omaha Choice fed steers in 1987.

Last year's stronger cattle prices came at the expense of a tight farm-to-retail spread, which fell nearly 2 percent in 1987. The carcass-to-retail spread declined only slightly, while the farm-to-carcass spread dropped 15 percent, slightly over 1 cent per pound. Much of the loss in the farm-to-packer margin was more than made up for with a 4-cent-per-pound increase in byproduct values. This increase likely kept packers operating on a profitable level and allowed them to bid higher prices for finished cattle.

Additional price strength for fed cattle beyond the levels expected this spring—perhaps peaking in the high \$60's to low \$70's—will be hampered by record large supplies of competing meats. Larger poultry and pork production could push total red meat and poultry consumption to 222 pounds per

### **Per Capita Red Meat and Poultry Consumption**

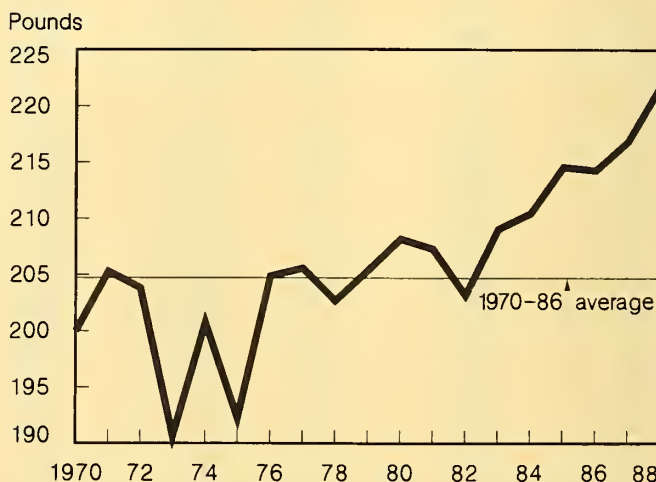




Table 11--Great Plains custom cattle feeding: Selected costs at current rates 1/

Purchased during: Marketed during:	Feb. Aug.	Mar. Sept.	Apr. Oct.	May Nov.	June Dec.	July Jan.	Aug. Feb.	Sept. Mar.	Oct. Apr.	Nov. May	Dec. June
Expenses: (\$/head)											
600 lb feeder steer	421.86	423.36	428.88	417.78	427.14	451.08	464.28	485.40	453.78	443.04	448.50
Transportation to feedlot (300 miles)	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96
Commission	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Feed											
Milo (1500 lb) 2/	46.05	49.05	52.20	56.25	56.55	55.35	51.15	49.20	51.60	52.95	53.40
Corn (1500 lb) 2/	52.65	54.90	57.60	63.75	63.30	60.15	55.50	56.25	58.65	59.85	62.55
Cotton seed meal (400 lb)	45.20	45.20	44.00	44.00	44.00	45.20	45.20	45.20	55.60	55.60	55.60
Alfalfa hay (800 lb)	45.20	45.20	41.20	42.00	46.00	44.00	42.00	42.80	43.20	45.60	46.80
Total feed cost	189.10	194.35	195.00	206.00	209.85	204.70	193.85	193.45	209.05	214.00	218.35
Feed handling and management charge	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00
Vet medicine	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Interest on feeder and 1/2 feed	24.53	24.73	26.98	26.69	27.27	28.36	28.76	29.83	30.01	29.56	29.98
Death loss (1.5% of purchase)	6.33	6.35	6.43	6.27	6.41	6.77	6.96	7.28	6.81	6.65	6.73
Marketing 3/	F.o.b.	F.o.b.	F.o.b.	F.o.b.	F.o.b.	F.o.b.	F.o.b.	F.o.b.	F.o.b.	F.o.b.	F.o.b.
Total	672.78	679.75	688.25	687.70	701.63	721.87	724.81	746.92	730.61	724.21	734.51
Selling price required to cover: 4/ \$/cwt											
Feed and feeder cost (1056 lb)	57.86	58.50	59.08	59.07	60.32	62.10	62.32	64.29	62.77	62.22	63.15
All costs	63.71	64.37	65.18	65.12	66.44	68.36	68.64	70.73	69.19	68.58	69.56
Selling price 5/	65.12	66.46	67.00	67.09	66.12	67.30					
Net margin	1.41	2.09	1.82	1.97	- .32	-1.06					
Cost per 100 lb Gain:											
Variable cost											
less interest \$/cwt	43.89	44.94	45.09	47.25	48.05	47.09	44.96	44.95	47.97	48.93	49.82
Feed costs \$/cwt	37.82	38.87	39.00	41.20	41.97	40.94	38.77	38.69	41.81	42.80	43.67
Prices:											
Choice feeder steer											
600-700 lb Amarillo	70.31	70.56	71.48	69.63	71.19	75.18	77.38	80.90	75.63	73.84	74.75
Transportation rate \$/cwt/100 miles 6/	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22
Commission fee \$/cwt	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
Milo \$/cwt	2.92	3.12	3.33	3.60	3.62	3.54	3.26	3.13	3.29	3.38	3.41
Corn \$/cwt	3.36	3.51	3.69	4.10	4.07	3.86	3.55	3.60	3.76	3.84	4.02
Cottonseed Meal (41%) \$/cwt 7/	11.30	11.30	11.00	11.00	11.00	11.30	11.30	11.30	13.90	13.90	13.90
Alfalfa hay \$/ton 8/	83.00	83.00	73.00	75.00	85.00	80.00	75.00	77.00	78.00	84.00	87.00
Feed handling and management \$/ton	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Interest, annual rate 9/	9.50	9.50	10.25	10.25	10.25	10.25	10.25	10.25	10.75	10.75	10.75

1/ Represents only what expenses would be if all selected items were paid for during the period indicated. The feed ration and expense items do not necessarily coincide with experience of individual feedlots. For individual use, adjust expenses and prices for management, production level, and locality of operation. Steers are assumed to gain 500 lbs in 180 days at 2.8 lbs per day with feed conversion of 8.4 lbs per pound gain. 2/ Texas Panhandle elevator price plus \$0.15/cwt handling and transportation to feedlots. 3/ Most cattle sold f.o.b. at the feedlot with 4-percent shrink. 4/ Sale weight 1,056 lbs (1,100 lbs less 4-percent shrink). 5/ Choice slaughter steers, 900-1100 lbs, Texas-New Mexico direct. 6/ Converted from cents per mile for a 44,000-lb haul. 7/ Average prices paid by farmers in Texas. 8/ Average price received by farmers in Texas plus \$30/ton handling and transportation to feedlots. 9/ Prime rate plus 2 points.

Table 12--Corn Belt cattle feeding: Selected costs at current rates 1/

Purchased during: Marketed during:	Feb. '87 Aug.	Mar. Sept.	Apr. Oct.	May Nov.	June Dec.	July Jan.	Aug. Feb.	Sept. Mar.	Oct. Apr.	Nov. May	Dec. June
Expenses: (\$/head)											
600 lb feeder steer	428.28	426.78	437.40	440.28	444.00	457.20	476.28	489.00	462.00	477.00	473.00
Transportation											
to feedlot-400 mile	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28
Corn (45 bu)	59.85	63.90	67.95	74.25	75.60	71.55	64.80	65.03	68.85	72.45	76.95
Silage (1.7 tons)	24.91	25.53	26.44	27.63	28.30	26.84	25.42	25.61	26.19	27.43	28.84
Protein supplement											
(270 lb)	32.67	32.67	31.32	31.32	31.32	33.21	33.21	33.21	34.43	34.43	34.43
Hay (400 lb)	9.70	9.60	9.70	9.70	10.00	9.50	9.40	9.50	9.40	9.80	10.20
Total feed costs	127.13	131.70	135.41	142.90	145.23	141.10	132.83	133.34	138.86	144.10	150.42
Labor (4 hours)	15.72	15.72	15.72	15.72	15.72	15.72	15.72	15.72	15.72	15.72	15.72
Management (1 hr.) 2/	7.86	7.86	7.86	7.86	7.86	7.86	7.86	7.86	7.86	7.86	7.86
Vet Medicine 3/	5.13	5.13	5.25	5.25	5.25	5.30	5.30	5.30	5.36	5.36	5.44
Interest on purchase											
(6 months)	23.77	23.69	23.84	24.00	24.20	25.15	26.20	26.90	25.92	26.76	26.56
Power, equip., fuel,											
shelter, deprec. 3/	23.91	23.91	24.46	24.46	24.46	25.12	25.12	25.12	25.38	25.38	25.38
Death loss											
(1% of purchase)	4.28	4.27	4.37	4.40	4.44	4.57	4.76	4.89	4.62	4.77	4.73
Transportation											
(100 miles)	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31
Marketing expenses	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35
Miscellaneous and											
indirect costs 3/	10.34	10.34	10.58	10.58	10.58	10.86	10.86	10.86	10.98	10.98	10.98
Total	657.36	660.34	675.83	686.39	692.67	703.91	715.96	730.02	707.73	728.96	731.43
Selling price required											
to cover: (\$/cwt)											
Feed and feeder cost											
(1050 lb)	52.90	53.19	54.55	55.54	56.12	56.98	58.01	59.27	57.23	59.15	59.41
All costs (1050 lb)	62.61	62.89	64.36	65.37	65.97	67.04	68.19	69.53	67.40	69.42	69.66
Feed cost per 100 lb											
gain (450 lb)	28.25	29.27	30.09	31.76	32.27	31.36	29.52	29.63	30.86	32.02	33.43
Choice steers,											
Omaha (900-1100 lb)	64.50	64.81	64.81	64.20	63.93						
Net margin	1.89	1.92	.45	-1.17	-2.04						
Prices:											
Feeder steer, Choice											
(600-700 lb) \$/cwt											
Kansas City \$/cwt	71.38	71.13	72.90	73.38	74.00	76.20	79.38	81.50	77.00	79.50	78.90
Corn \$/bu 4/	1.33	1.42	1.51	1.65	1.68	1.59	1.44	1.45	1.53	1.61	1.71
Hay \$/ton 4/	48.50	48.00	48.50	48.50	50.00	47.50	47.00	47.50	47.00	49.00	51.00
Corn silage \$/ton 5/	14.65	15.02	15.55	16.25	16.65	15.79	14.96	15.06	15.41	16.14	16.97
Protein supplement											
(32-36%) \$/cwt	12.10	12.10	11.60	11.60	11.60	12.30	12.30	12.30	12.75	12.7	12.75
Farm labor \$/hour	3.93	3.93	3.93	3.93	3.93	3.93	3.93	3.93	3.93	3.93	3.93
Interest rate, annua	11.10	11.10	10.90	10.90	10.90	11.00	11.00	11.00	11.22	11.22	11.22
Transportation rate											
\$/cwt. per 100 mile	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22	.22
Mktg. expenses											
\$/cwt 8/	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35	3.35
Index of prices											
paid by farmers											
(1910-14=100)	1091	1091	1116	1116	1116	1146	1146	1146	1158	1158	1158

1/ Represents only what expenses would be if all selected items were paid for during the period indicated. The feed ration and expense items do not necessarily coincide with experience of individuals for management, production level, and locality of operation. 2/ Assumes 1 hour at twice the labor rate. 3/ Adjusted quarterly by the index of prices paid by farmers for commodities, services, interest, taxes, and wage rates. 4/ Average price received by farmers in Iowa and Illinois. 5/ Corn silage price derived from an equivalent price of 5 bushels corn and 330 lb hay. 6/ Average price paid by farmers in Iowa and Illinois. 7/ Converted from cents/mile for a 44,000-pound haul. 8/ Yardage plus commission fees at a Midwest terminal market.



capita in 1988, up from 217 pounds in 1987. In spite of the larger supplies of meat available, tight nonfed beef supplies will keep cow prices from slipping. Utility cows at Omaha should average near \$46, about \$1 above 1987. Additional price strength will likely be held down by large supplies of pork and poultry that will end up as processing meat. However, a fairly large proportion of the nonfed beef supply along with a larger share of the fed beef supply will be ground for hamburger.

Calf prices next fall will reflect the tight supply situation for light weight cattle. These calves should demand a premium upwards of \$90 per cwt, and will continue to be bid aggressively for either placement in feedlots or to stocker operations. This should assure cow/calf producers of another profitable year and possibly fuel the long awaited expansion in cattle numbers by the turn of the decade.

### *Cattle Inventories in Major Countries*

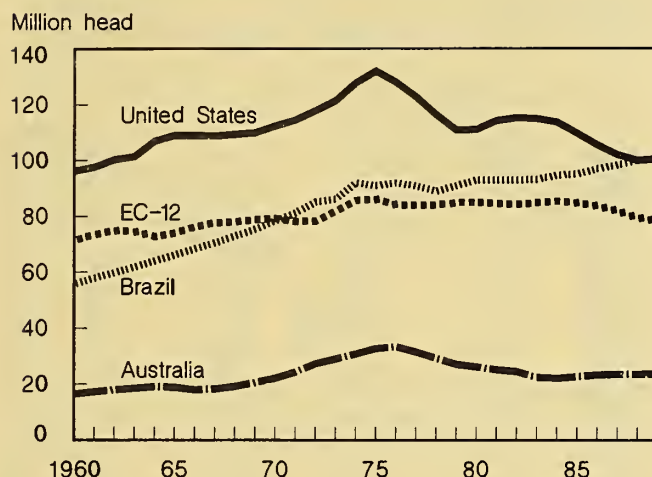
Cattle inventories in the major beef producing countries probably declined 1 percent to 1,033 million head during 1987. Inventories fell in India because of drought, and additional declines occurred in the United States, Argentina, and the EC. A marginal increase in total cattle inventories is forecast

Table 13--World cattle inventory 1/

Country	1960	1975	1980	1986	1987	1988
Million head						
Canada	10.4	14.3	12.1	10.6	10.4	10.3
Mexico	17.4	29.2	33.0	32.2	33.6	35.6
U.S.	96.2	132.0	111.2	105.5	102.0	99.9
Argentina	45.7	60.1	59.3	57.5	55.7	55.0
Brazil	55.7	91.0	91.0	95.2	97.0	98.3
EC	71.4	86.1	85.1	83.6	81.8	79.5
EE	30.0	38.5	38.4	37.3	37.1	37.0
USSR	74.2	109.1	115.1	120.9	122.1	121.5
India	221.5	239.1	252.6	275.3	273.6	262.6
China	N.A.	74.6	71.3	86.8	91.7	96.7
Japan	3.2	3.6	4.2	4.7	4.7	4.7
Australia	16.5	32.8	26.2	23.4	23.3	23.6
New Zealand	6.0	9.7	8.0	7.9	8.3	8.1
Other	77.4	100.8	108.3	103.1	101.4	100.0
Total	725.6	1020.9	1015.8	1044.0	1042.7	1031.9

1/ Beginning year inventory.

### Cattle Inventories



during 1988. Total cattle inventories have changed little over the last several years, a marked difference from 1960-75 when inventories increased dramatically.

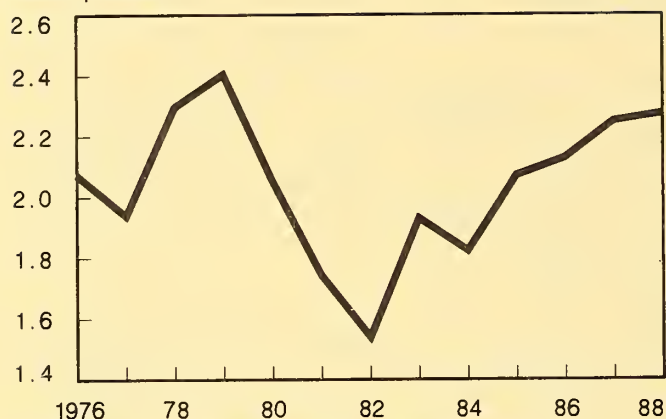
The rapid inventory increases in the United States and elsewhere were fueled by expanding economies, rising incomes, improved pastures and plentiful grain supplies. In most of the world forages make up the primary component of the beef cattle diet, in contrast to the United States where only the breeding herd consumes mostly forages. In the United States over half of the weight of fed cattle marketed is produced from forages.

After 1975 land began to be switched from cattle to crops, due mainly to higher prices and expanded export demand for grain. Rising petroleum prices increased the price of nitrogen fertilizer, reducing its use in the United States and reducing the remaining pasture's carrying capacity.

Demand for beef is highest in the high income countries. In these developed countries, cattle herds are more intensively managed and offtake rates are also the largest. The higher income countries slaughter about a third of their herds each year. This ratio will be slightly lower if the cattle cycle is in the retention phase, or higher if in the liquidation phase. The offtake rate in developing countries is only between 10 and 20 percent of total inventory.

## Beef Imports

Million pounds



Carcass weight. Fourth-quarter 1986 and 1987 forecast.

The largest herd is in India, with about one-fourth of the world's cattle and buffaloes. However, only about 1 percent of the Indian herd is slaughtered for meat. Only a minority of the Indians, about 35 percent, do not have religious objections to eating beef. The cattle and buffalo in India, as well as in many other countries, are important for providing milk as well as draft power. Inventories fell during 1987 because of the severe drought that reduced forages, increased livestock deaths from stress and increased distress slaughter, and reduced fertility and conception rates. Continued declines in inventories are expected during 1988.

The next two largest herds are in the USSR and the United States, with about 10 percent of the total each. Both are major beef and veal importers although the United States imports about two to three times more than the Soviet Union. In the USSR slaughter increased, but with last year's harsh winter and below average quality winter feed, slaughter weights were down. Because death losses were up also and the calf crop decreased, it may be another year before inventories recover. To meet ambitious meat production targets, the USSR may have to increase imports of live animals or meat.

The major beef exporting areas are the EC, Australia, New Zealand, Brazil, and Argentina. The EC has 8 percent of the world's cattle and has become the largest beef

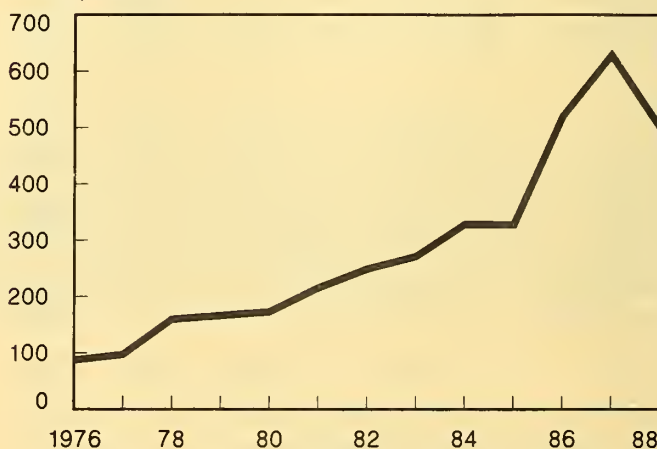
exporting region. In the EC a high percentage of the beef comes from the dairy herd. However, because of burdensome excess dairy products the EC has been attempting to reduce the dairy herd. As a consequence beef supplies have risen, and total cattle inventories declined.

Australia, the next largest exporter, has only 2 percent of the total cattle inventories, and New Zealand only 1 percent. Australia and New Zealand have a large land base and relatively few people and a large percentage of the meat output is exported. In Australia over half of the beef output is exported while New Zealand exports about three-fourths. This compares with 15 percent in the EC and 2 percent in the United States. Australia has about one and a half head of cattle per person and New Zealand has two and a half. This compares with about one-quarter of a head in the EC with about half a head in the United States.

In Australia, rising export demand kept cattle herds from expanding as slaughter increased during 1986. A marginal increase in herd size during 1987 and 1988 is expected. New Zealand inventories are for July of the previous years. In New Zealand, a nationwide meat strike during 1986 delayed slaughtering and therefore inventories shown are artificially high. Cattle numbers are expected to continue to rise slowly. A recovery in prices has increased returns from cattle.

## Beef Exports

Million pounds





Cattle herds have been steadily increasing in Brazil and they now account for almost 10 percent of the world total. Brazilian cattle inventories were much higher than anticipated at the beginning of 1987 because producers had held cattle back from slaughter during 1986 to protest the Government's price freeze. Inventories are forecast to continue expanding as weather and pasture conditions have been good, and declining consumer purchasing power has kept slaughter increases moderate.

### Veal Production Declines

Strong demand for a reduced supply of feeder cattle, and the end of the Dairy Termination Program caused a 17-percent drop in calf slaughter in 1987. Production also dropped 17 percent as slaughter weights remained about unchanged from a year earlier. The farm price of calves averaged \$78.05 in 1987, up nearly 30 percent from a year earlier.

Veal production is expected to drop another 4 to 6 percent in 1988 as this year's calf crop is expected to decline again. In addition, demand for stocker and feeder cattle is expected to remain strong with more calves being held for additional growth before being

Table 14--Commercial calf slaughter and production

Year	Slaughter	Dressed weight	Production
	1,000 head	Pounds	Million pounds
1985			
I	820	145	119
II	770	156	120
III	872	144	126
IV	923	145	134
Year	3,385	148	499
1986			
I	873	148	129
II	836	154	129
III	859	150	129
IV	839	145	122
Year	3,408	149	509
1987			
I	768	147	113
II	657	154	101
III	689	145	100
IV	725	145	105
Year	2,839	147	419

Table 15--Calf slaughter by class under Federal inspection

Year	Bob veal 150 lb & below	Fed Formula 150-400 lb	Nonformula 150-400 lb	Other over 400 lb	Total
1,000 head					
1986					
Jan.	156.0	86.7	26.0	20.3	289.0
Feb.	135.3	83.2	18.8	18.7	256.0
Mar.	147.3	87.5	20.7	20.4	275.9
Apr.	149.8	82.7	29.8	21.9	284.2
May	121.2	86.2	29.6	20.4	257.4
Jun.	111.9	84.0	26.4	17.8	240.1
Jul.	149.6	87.2	27.3	17.2	281.3
Aug.	135.9	83.8	23.8	18.4	261.9
Sept.	135.0	86.9	25.0	16.3	263.2
Oct.	132.5	86.9	22.1	34.5	276.0
Nov.	117.0	68.1	19.0	34.1	238.2
Dec.	127.1	86.1	17.4	41.0	271.6
Yr	1618.6	1009.3	285.9	281.0	3194.8
1987					
Jan.	115.9	87.1	15.1	29.5	247.6
Feb.	104.5	82.2	13.3	24.7	224.7
Mar.	120.5	90.2	13.8	26.6	251.1
Apr.	89.4	86.8	15.5	23.2	214.9
May	70.0	80.7	14.4	24.0	189.1
Jun.	81.3	94.2	13.3	25.7	214.5
Jul.	101.3	80.8	12.1	26.0	220.2
Aug.	101.6	64.2	14.8	21.8	202.4
Sept.	99.4	91.0	14.0	24.2	228.6
Oct.	102.8	85.6	19.3	25.4	233.1
Nov.	103.5	70.4	12.3	25.1	211.3
Dec.	117.6	89.5	13.5	21.3	241.9
Yr	1207.8	1002.7	171.4	297.5	2679.4
1988					
Jan.	115.9	87.1	15.1	29.5	247.6

sold. Prices are likely to rise another \$3 to \$5 per cwt in 1988.

A new monthly series on federally inspected (F.I.) calf slaughter by type is being reported in the Agricultural Marketing Service's *Livestock, Meat and Wool*. Data also will be carried in the *Livestock and Poultry Situation*. The series provides a good view on the slaughter mix by weight group and type of veal produced. In both years presented, bob veal calves 150 pounds and lower comprised the largest proportion of slaughter--51 percent in 1986 and 45 percent in 1987. Formula fed calves weighing 150 to 400 pounds, representing specialized veal slaughter, made up the second largest type with 32 and 37 percent in 1986 and 1987, respectively. This type also likely represents the largest production class because of the heavier slaughter weights--150 to 400 pounds. A large proportion of calves were pulled into the formula fed category in 1987 as total calf slaughter declined. FI calf slaughter comprised 93.7 and 94.5 percent of commercial slaughter in 1986 and 1987, respectively.

## Sheep and Lambs

### *Sheep Inventory Increases for the Second Straight Year*

The inventory of all sheep and lambs on January 1, 1988, was 4 percent above a year earlier. This was the second year of expansion following several years of profitability. Inventories of ewes 1 year old and older increased 3 percent to 7.0 million head. These are the sheep that will lamb this year. Ewe lambs were down 2 percent from a year ago at nearly 1.3 million head. During 1986, the ewe lamb inventory rose 24 percent. Therefore, the decline at the start of 1988 suggests moderating inventories rather than any major downturn. If mature sheep slaughter increases slightly as a percent of total slaughter and death rates remain the same as in 1987, this level of ewe lamb retention would translate

Table 16--Sheep inventory by classes, United States, January 1

Class	1986	1987	1988	1988/1987
	1,000 head			Percent
All sheep and lambs 1/	9,983	10,324	10,774	+4
On feed	1,492	1,508	1,781	+18
Stock sheep	8,491	8,826	8,993	+2
Lambs				
Ewes	1,048	1,296	1,266	-2
Wethers and rams	318	363	324	-11
One year old and older:				
Ewes	6,817	6,847	7,077	+3
Wethers and rams	310	320	327	+2

1/ New-crop lambs are not included.

into a 1- to 2-percent increase in the mature ewe inventory for January 1, 1989.

New-crop lambs were even with a year ago, while lambs on feed were up 18 percent. Lambs from these categories should be slaughtered in the first half of this year. Prices are expected to average in the mid \$70's for 1988. Thus, sheep producers should have another profitable year, further reinforcing the expectations for continued, if somewhat moderated, expansion in the breeding flock.

Regional changes in inventories of ewes 1 year old and older were slightly different than a year earlier. The West showed the biggest increases in the ewe flock—about 6 percent above a year ago. The largest increases occurred in Oregon, Washington, Arizona, and Wyoming. The two largest sheep States, Colorado and California, showed a 7-percent increase and no change, respectively. In the Great Plains region, sheep inventories increased a little over 2 percent from a year ago. Most of this expansion came from outside of Texas. Texas ewe inventories were up less than 1 percent, with ewe lambs unchanged from a year ago. The surprising numbers occurred east of the Rocky Mountains. Ewe numbers dropped about 4 percent in the North Central region and were only 2 percent above 1986. The Southeast region was down 5 percent on January 1, 1988, after a 12-percent increase a year earlier. Ewe lamb numbers increased 4 percent in the Northeast. The decline in the Eastern regions was not substantial because the West and the Great Plains still made up 82 percent of the ewe lambs 1 year old and older on January 1, 1988.

Table 17--Balance sheet for sheep and lambs, United States

Year	On farms Jan. 1	Lamb crop	Net exports	Total slaughter	Deaths	Adjustment factor	On farms Dec. 31
	1,000 head						
1980	12,699	8,257	103	5,742	1,920	-244	12,947
1981	12,947	8,820	214	6,197	1,853	-506	12,997
1982	12,997	8,580	271	6,643	1,875	-648	12,140
1983	12,140	8,209	213	6,792	1,608	-249	11,487
1984	11,487	7,788	301	6,900	1,724	+90	10,443
1985	10,443	7,412	338	6,300	1,383	+150	9,983
1986	9,983	7,356	100	5,762	1,274	+131	10,334
1987	10,334	7,230	15	5,312	1,285	-178	10,774
1988	10,774						



*Last Year's Production  
Lowest Since 1979*

Prices for slaughter lambs in San Angelo averaged \$78.09 for 1987, up from \$69.46 in 1986. Prices averaged \$80.27 and \$90.82 in the first and second quarters, respectively, up from \$65.63 and \$76.61 for the same periods in 1986. Production during the first half of the year was down 10 percent from 1986. The quarterly distribution differed from 1986 because the major religious holidays were in late April in 1987, causing slaughter to be pushed into the second quarter. Second-half slaughter was down 4 percent from a year ago. Slaughter prices dropped to \$72.90 and \$68.36 in the third and fourth quarters, respectively, compared with \$69.45 and \$66.13 in 1986.

Prices for wholesale lamb carcasses weighing 55 to 65 pounds on the East Coast averaged \$150.41 in 1987, up from \$139.64 in 1986. The strength in this market occurred in the first half of 1987. First-quarter wholesale prices averaged \$155.56, and increased to \$167.47 in the second quarter. Wholesale prices declined in the second half of the year, averaging \$142.28 and \$136.37 in the third and fourth quarters, respectively.

Combining the increase in the number of lambs on feed and the new-crop lambs on

farms January 1, 1988, first-half production should be up about 6 percent. First-quarter production will show the largest year-over-year increases, at about 82 million pounds. Because the religious holidays occur early in April, slaughter for these holidays should be in the first quarter. Second-quarter production is expected to be about 78 million pounds. Prices for the first quarter are expected to average around \$79, increasing into the low \$80's for the second.

Second-half production is expected to be up about 2 percent, at 78 and 82 million pounds for the third and fourth quarters, respectively. Prices are likely to average in the low \$70's in the third and fourth quarters.

Wholesale prices should average slightly below the \$150.41 average for 1987. The strength in these prices should occur during March-May. Per capita consumption of lamb and mutton in 1988 may increase for the first time since 1984. The ability of the lamb industry to attract new retail customers will heavily influence price strength during this expansion in production. Loins and racks are sold to the higher-priced restaurant trade. Legs and the chucks are sold to the retail trade. Loin and rack have become a larger proportion of the carcass value in recent years. This implies that the institutional demand may have been driving prices over this period. If the retail sector has to absorb this increase in supply, there may be a larger than expected downward pressure on prices.

*Australian Sheep Inventories Rise,  
New Zealand's Decline*

The world's largest exporters of sheep, lamb, and mutton are Australia and New Zealand. They are also the predominant suppliers to the United States. The world's largest sheep inventories are found in Australia. Inventories are forecast to increase 2 percent during 1987 to 162 million head and similar increases are expected during 1988. Strength in the wool market accounts for the growth as no increase is expected in slaughter for meat. Sheep numbers in New Zealand were 66 million head in July 1987 and are expected to decline 3 percent this year. Because the production incentive schemes from 1978 to 1983 were removed, sheep flocks have been declining to levels more in line with market requirements. Output of lamb and

Table 18--Commercial sheep and lamb slaughter 1/  
and production

Year	Lambs	Sheep	Total	Dressed weight	Production
	1,000 head			Pounds	Mill lb
1985					
I	1,530	89	1,619	57	93
II	1,362	118	1,480	56	83
III	1,402	114	1,516	56	85
IV	1,458	92	1,550	59	91
Year	5,752	413	6,165	57	352
1986					
I	1,438	72	1,510	60	90
II	1,246	97	1,343	58	78
III	1,324	80	1,404	58	81
IV	1,306	72	1,378	60	82
Year	3,514	321	5,635	59	331
1987					
I	1,213	57	1,270	60	76
II	1,211	79	1,290	58	75
III	1,241	75	1,316	59	77
IV	1,253	69	1,322	61	80
Year	4,918	280	5,198	59	309

1/ Classes estimated.

mutton, however, is likely to remain at last year's level and little change is expected in total exports.

### Hogs

Although hog prices fell sharply in the fourth quarter, hog producers experienced a second consecutive year of favorable returns in 1987. The seven-market average price of barrows and gilts was nearly unchanged from 1986 at \$52, and feed costs were moderately lower. Producers responded to the relatively favorable economic climate by expanding herds. At the end of 1987, U.S. hog inventories were about 6 percent larger than a year earlier. However, the rate of expansion

was modest compared with similar expansion phases in the past.

Total pork supplies in 1987 were up about 2 percent from the previous year, with commercial production up 2 percent at 14.3 billion pounds. Net imports increased by about 64 million pounds to 1.1 billion. Per capita consumption of pork totaled approximately 59.1 pounds on a retail-weight basis, compared with 58.6 pounds in 1986. Average retail pork prices increased by almost 6 percent.

After hovering near \$40 per cwt for 10 weeks, barrow and gilt prices strengthened considerably in midwinter. This seasonal strength, which developed later than usual,

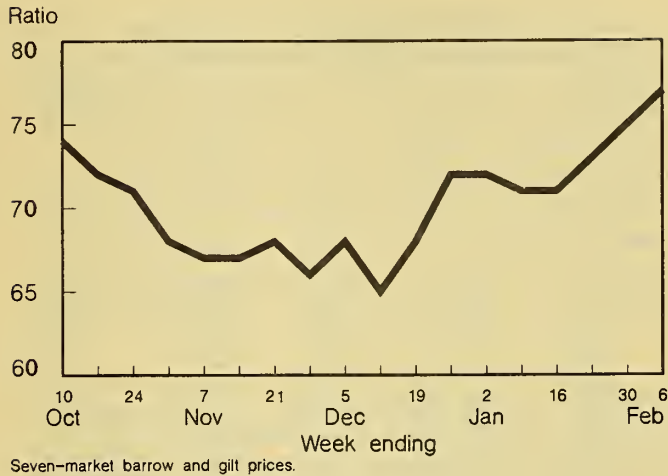
Table 19--Farrow-to-finish hog production costs and returns, 1,600 head annual sales  
North Central Region

Item	1987									
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Dollars per cwt										
Cash receipts: 2/										
Market hogs (94.25 lb)	48.25	51.94	57.30	57.85	56.55	51.82	47.83	38.76	39.41	
Cull sows (5.75 lb)	2.59	2.61	2.60	2.68	2.77	2.76	2.73	1.94	1.69	
Total	50.84	54.55	59.9	60.53	59.32	54.58	50.56	40.70	41.10	
Cash expenses										
Feed-- 3/										
Corn (345.6 lb)	10.67	9.91	9.06	8.79	8.95	9.75	9.95	9.47	8.76	
Soybean meal (70.6 lb)	6.99	6.83	6.83	6.83	6.89	6.89	6.89	7.32	7.32	
Mixing concentrates (14.3 lb)	2.89	2.89	2.89	2.89	2.84	2.84	2.84	2.84	2.84	
Total feed	20.55	19.63	18.78	18.51	18.68	19.48	19.68	19.63	18.92	
Other--										
Veterinary and medicine 4/	0.74	0.74	0.74	0.74	0.73	0.73	0.73	0.73	0.73	
Fuel, lube, and electricity	1.43	1.44	1.44	1.44	1.46	1.46	1.46	1.48	1.48	
Machinery and building repairs	2.42	2.42	2.42	2.41	2.41	2.41	2.42	2.42	2.42	
Hired labor 5/	1.29	1.29	1.29	1.27	1.27	1.27	1.27	1.27	1.27	
Miscellaneous	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	
Total variable expenses	27.04	26.13	25.28	24.98	25.16	25.96	26.17	26.14	25.43	
General farm overhead	1.75	1.88	2.06	2.08	2.05	1.89	1.75	1.41	1.42	
Taxes and insurance	0.64	0.64	0.64	0.64	0.85	0.85	0.85	0.63	0.63	
Interest	4.41	4.63	5.09	5.14	5.04	4.64	4.29	3.43	3.46	
Total fixed expenses	6.80	7.15	7.79	7.86	7.94	7.38	6.89	5.47	5.51	
Total cash expenses 6/	33.84	33.28	33.07	32.84	33.10	33.34	33.06	31.61	30.94	
Receipts less cash expenses	17.00	21.27	26.83	27.69	26.22	21.24	17.50	9.09	10.16	
Capital replacement	5.80	5.84	5.84	5.84	5.82	5.82	5.82	5.83	5.83	
Receipts less cash expenses and replacement	11.20	15.43	20.99	21.85	20.40	15.42	11.68	3.26	4.33	

1/ The feed rations and expense items do not necessarily coincide with the experience of individual hog operations and are an average of a group of operators. For individual use, adjust expenses and prices for management, production levels and locality of operation. 2/ Cash receipts are based on 94.25 lb of barrows and gilts liveweight and 5.75 lb of sows per cwt sold. 3/ Feed costs are based on 345.6 lb of corn and 70.3 lb soybean meal, 14.6 lb of mixing concentrates. 4/ The veterinary and medicine expense includes costs for feed medication, that is usually included as part of the feed cost. 5/ Hired labor charge is based on .204 hours per cwt of liveweight hog marketed. 6/ Cash expenses do not include a charge for family or operator labor (.732 hours) or a charge for land and fixed assets.



## Ratio of Hog Prices to #2 Cutout Value



was generated by a modest improvement in carcass cutout values and a sharp reduction in packer margins. By mid-February the weekly average price of barrows and gilts at the seven major markets reached \$49 per cwt.

Between early December and mid-February, weekly slaughter declined about 20 percent. As slaughter diminished, bids for pork loins and other fresh pork cuts improved, offsetting a sharp, post-holiday slump in ham prices. Extended periods of

severe weather interrupted movement of live hogs and pork products, and the spread between live hog prices and carcass cutout values narrowed substantially as marketings slowed.

With the winter peak near \$50 per cwt, barrow and gilt prices will probably average \$43-\$46 in the first quarter. A seasonal increase in slaughter will likely depress prices in March, although such pressure may be limited by the early Easter holiday. With

## Average Daily Hog Slaughter

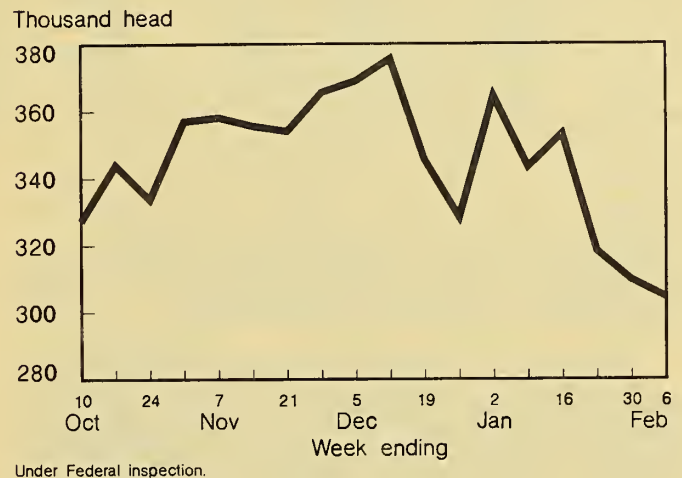


Table 20--Commercial hog slaughter 1/ and production

Year	Barrows & gilts	Sows	Boars	Total	Dressed weight	Commercial production
		1,000 head			Pounds	Million pounds
1985						
I	19,726	927	217	20,871	173	3,618
II	20,171	947	225	21,343	175	3,743
III	19,260	1,075	222	20,556	173	3,553
IV	20,445	1,065	211	21,721	176	3,814
Year	79,602	4,015	875	84,492	174	14,726
1986						
I	19,272	920	187	20,379	175	3,570
II	19,224	896	196	20,316	176	3,568
III	17,365	999	210	18,573	174	3,237
IV	19,223	927	179	20,330	178	3,623
Year	75,084	3,742	772	79,598	176	13,998
1987						
I	19,006	762	170	19,938	178	3,540
II	17,867	846	188	18,901	177	3,325
III	18,198	1,008	186	19,392	175	3,384
IV	21,803	888	169	22,860	178	4,065
Year	76,874	3,504	713	81,091	177	14,314

1/ Classes estimated.

Easter occurring April 3, ham prices will probably strengthen in March, lending support to hog prices.

Historical inventory relationships suggest that second-quarter commercial slaughter could be around 20.8 million head, with weekly kills averaging about 10 percent above a year ago. Per capita pork supplies may also be up 10 percent. There is a substantial difference between second-quarter slaughter projections based on the fall 1987 pig crop, and projections based on the inventory of market pigs weighing less than 60 pounds on December 1, 1987. Using the pig crop as a base, weekly kills under Federal inspection could be as high as 1.7 million head in April (up 13-15 percent from a year ago), falling to around 1.5 million in June. By contrast, market inventories indicate that weekly slaughter could average less than 1.6 million head in April (up 7-9 percent) and drop to 1.4 million in June. The former scenario would imply a second-quarter average price of barrows and gilts in the mid-\$40's per cwt, while the latter would pull the average price into the high \$40's.

Either way, it appears that the market will experience a normal seasonal rally in late spring, and hog prices in June can be near \$50 per cwt. Pork loins are seasonally strong at that time, and the loin market in 1988 has thus far been generally firm. The outlook for second-quarter pork production leaves room for loins to reach the \$105 to \$115 per cwt

range, which under normal circumstances would support a \$50 hog market.

Hog slaughter is likely to increase significantly throughout the summer, and cold storage stocks, which are typically liquidated during June-September, are about 40 percent larger than a year ago. Per capita pork supplies may show a contraseasonal rise from the second to the third quarter for the first time since 1979. As a result, barrow and gilt prices may decline in the third quarter to \$42-46 per cwt at the seven major markets.

The futures market adopted a bullish posture following the release of the *Hogs and Pigs* report in January, pushing prices for deferred futures contracts sharply higher. If the optimistic attitude persists through spring, hog producers—who have thus far maintained positive returns—may be encouraged to increase their farrowing intentions. In addition, premiums in deferred futures contracts may further encourage the movement of pork into cold storage. Such developments would weigh heavily on wholesale pork and live hog prices in the second half of 1988 and early 1989.

## POULTRY AND EGGS

### Broilers

#### *Broiler Production Increase Continues in 1988*

Broiler production will continue increasing in 1988, although at a slower rate than in 1987. Production in 1988 is expected to increase 5 percent from 1987 to more than 16 billion pounds of fresh chicken. Production during 1987, at more than 15.5 billion pounds, was 9 percent greater than in 1986. Net returns changed from positive during the first three quarters of 1987 to negative in the fourth quarter. Net returns are expected to remain negative or near breakeven through much of 1988. Large amounts of chicken and pork are expected to offset any reduction in beef production, and keep prices near or below breakeven. Increased feed costs during the first half of 1988 from a year ago will also squeeze net returns. Because of the negative net returns, producers are expected to slow production increases considerably by fourth-quarter 1988.

### Pork in Cold Storage

Million pounds

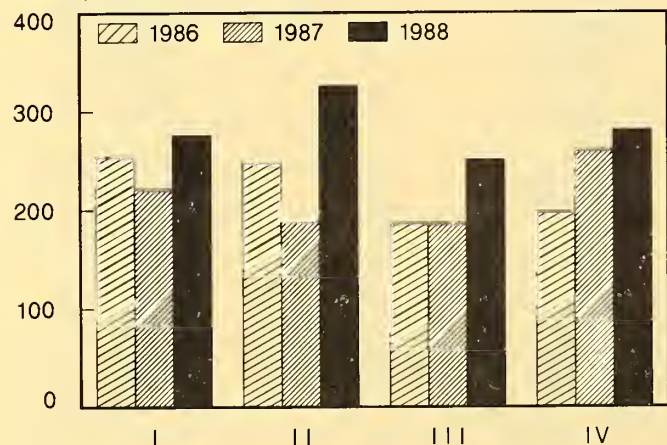




Table 21—Broiler chicks hatched and pullet chicks placed  
in hatchery supply flocks, 1985-87

Month	Broiler-type chicks			Pullet chicks placed in broiler hatchery supply flocks						
				Monthly placements			Cumulative placements 7-14 months earlier			
	1985	1986	1987	1985	1986	1987	1985	1986	1987	1988
	Thousands									
January	401,666	409,336	439,618	3,471	3,395	4,077	27,277	27,483	29,039	33,028
February	364,542	376,092	406,140	3,017	3,420	3,699	27,286	27,940	29,427	33,254
March	418,842	432,871	457,224	3,603	3,675	4,111	26,771	27,374	29,523	32,805
April	411,739	424,078	454,271	3,884	4,062	4,713	26,647	27,156	29,722	32,185
May	423,991	438,623	471,162	3,672	3,938	4,055	26,733	27,321	30,148	32,612
June	410,815	428,691	458,337	3,162	3,515	4,181	26,225	27,002	30,242	32,264
July	407,502	429,883	458,908	3,400	3,672	3,995	25,944	26,868	30,603	31,668
August	406,426	415,991	449,920	3,165	3,846	3,974	25,895	26,591	30,742	
September	380,138	401,676	430,664	3,253	3,594	3,457	25,513	26,849	30,926	
October	382,559	416,193	438,841	3,182	3,846	4,126	25,981	27,124	31,365	
November	379,050	402,582	420,234	3,284	3,769	3,763	26,790	28,021	32,232	
December	414,886	437,287	465,464	3,750	4,423	4,117	27,384	28,706	32,693	

Broiler production during the first quarter of 1988 is forecast to increase 7 percent from a year earlier. Monthly hatch data for November and December 1987 rose 5 percent and weekly broiler chick placements in January 1988 were about 6 percent greater than a year earlier. Average slaughter weights were about 1 to 1 1/2 percent greater in the last quarter of 1987 compared with the same quarter a year ago. Weekly slaughter during January 1988 was 9 percent greater.

Broiler production is expected to increase another 7 percent during second-quarter 1988, but three indicators show that the rate of increase may slow later in the year. The hatching egg-type flock was 6 percent greater than a year earlier in December 1987, compared with 10 percent greater during June-August 1987. (Although the hatching egg-type flock contains egg-type and broiler-type layers, broiler-type hatching egg layers predominate.) Additionally, placements in the broiler hatchery supply flock in December 1987 were only 93 percent of

December 1986 placements. Lastly, slaughter of heavy-type (broilers) fowl during October 1987 to January 1988 has been above the same period a year ago. Monthly data for the last quarter of 1987 indicate heavy fowl slaughter numbers were 12 percent above a year ago. Weekly data for January 1988 show that heavy fowl slaughter numbers were 24 percent above the same month a year earlier.

#### *Broiler Prices*

##### *Forecast Lower in 1988*

The 12-city wholesale broiler price for 1988 is expected to average 40-46 cents per pound, down from 47.4 cents in 1987. The first-quarter 1988 price is forecast to average 41-45 cents. Winter weather affected prices during the early part of 1988, contributing to some wide swings in weekly prices. Due to seasonal factors, such as barbecuing, second and third quarter prices are forecast to increase slightly from the first quarter, averaging 41-47 cents.

Table 22--Broilers: Eggs set and chicks placed weekly in 12 commercial States, 1987-88 1/

Period 2/ Month and day 2/	Eggs set			Chicks placed		
	1987	1988	Percent of previous year	1987	1988	Percent of previous year
	-- -- Thousands -- --		Percent	-- -- Thousands -- --		Percent
January						
2	112,039	116,091	104	87,427	90,561	104
9	112,316	115,934	103	86,402	86,890	108
16	112,714	114,154	101	85,671	91,299	107
23	112,568	112,428	100	86,904	91,008	105
30	112,791	112,782	100	86,374	92,082	107
February						
6	112,014			86,509		
13	111,216			87,285		
20	115,079			87,483		
27	116,488			87,031		
March						
5	116,092			86,840		
12	115,863			88,959		
19	114,802			90,621		
26	117,294			90,026		
April						
2	117,906			90,398		
9	118,571			88,829		
16	117,036			91,200		
23	116,956			92,484		
30	115,800			92,095		
May						
7	118,008			91,205		
14	118,061			90,402		
21	117,457			90,787		
28	119,303			92,252		
June						
4	118,542			91,576		
14	117,880			91,223		
18	118,958			92,237		
25	115,620			93,280		
July						
2	109,321			91,953		
9	115,523			91,740		
16	113,937			90,144		
23	113,876			84,701		
30	113,436			89,454		
August						
6	113,167			87,379		
13	112,929			88,059		
20	112,831			88,048		
27	113,332			87,215		
September						
3	111,902			86,597		
10	107,605			86,511		
17	105,756			87,741		
24	109,237			86,550		
October						
1	114,480			84,037		
8	110,955			81,388		
15	102,216			84,103		
22	102,058			89,066		
29	112,557			87,561		
November						
5	115,958			80,500		
12	117,300			80,373		
19	117,500			88,265		
26	117,541			91,238		
December						
3	111,782			92,466		
10	116,382			92,395		
17	117,770			92,921		
24	115,926			88,058		

1/ 12 States: Ala., Ark., Calif., Del., Fla., Ga., Md., Miss., N.C., Pa., Tex., and Va.  
2/ Weeks in 1988 and corresponding weeks in 1987.

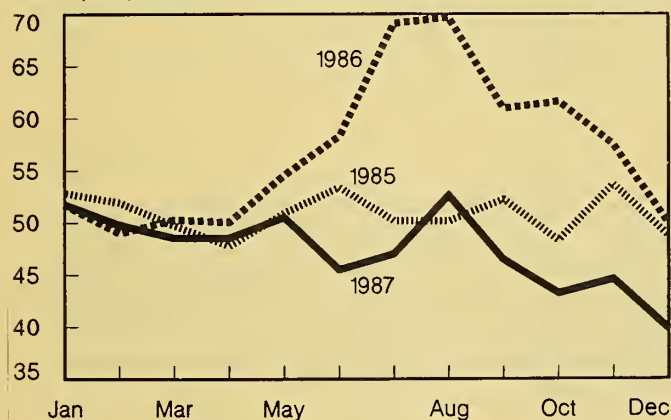


Table 23--Federally inspected young chicken slaughter, 1986-87

Year	Number	Average weight	Live-weight	Certified RTC
	Millions	Pounds	- Million Pounds -	
1986				
I	1,099	4.30	4,722	3,414
II	1,189	4.24	5,045	3,673
III	1,196	4.17	4,988	3,620
IV	1,159	4.25	4,921	3,558
Year	4,643	4.24	19,676	14,266
1987				
I	1,187	4.33	5,145	3,732
II	1,253	4.29	5,369	3,910
III	1,301	4.20	5,470	3,966
IV	1,229	4.35	5,349	3,891
Year	4,970	4.29	21,333	15,498

## Wholesale Broiler Prices

Cents per pound



November and December preliminary. 12-city composite.

Table 24--Poultry and egg estimated costs and returns, 1986-87 1/

	Production costs		Wholesale		Net returns
Year	Feed	Total	Total costs 2/	Price 3/	
Market eggs (cts/doz)					
1986					
I	27.0	45.2	65.7	74.4	8.7
II	27.4	45.6	66.1	63.8	-2.3
III	25.3	43.5	64.0	71.3	7.3
IV	22.0	40.2	60.7	74.6	13.9
Year 4/	25.4	43.6	64.1	71.1	6.9
1987					
I	21.8	40.0	60.5	66.4	5.9
II	23.1	41.3	61.8	58.9	-2.9
III	23.9	42.1	62.6	64.1	1.5
IV 5/	24.5	42.7	63.2	59.7	-3.5
Year 5/	23.3	41.5	62.0	62.3	0.3
Broilers (cts/lb)					
1986					
I	14.7	22.7	44.7	50.4	5.7
II	15.0	23.0	45.0	54.2	9.2
III	15.0	23.0	45.0	66.5	21.5
IV	12.9	20.9	42.3	56.3	14.0
Year 4/	14.4	22.4	44.3	56.9	12.6
1987					
I	12.7	20.7	42.0	50.0	8.0
II	12.8	20.8	42.1	48.1	6.0
III	14.3	22.3	44.1	48.8	4.7
IV 5/	13.7	21.7	43.4	42.5	-0.9
Year 4/	13.4	21.4	42.9	47.4	4.5
Turkeys (cts/lb)					
1986					
I	20.9	34.6	59.6	60.8	1.3
II	21.7	35.4	60.6	72.3	11.7
III	22.1	35.8	61.1	83.1	22.0
IV	19.7	33.4	58.1	78.0	19.9
Year 4/	21.1	34.8	59.9	75.2	13.7
1987					
I	18.4	32.1	56.5	57.0	.5
II	18.2	31.9	56.1	58.7	2.6
III	20.4	34.1	58.9	55.0	-4.0
IV 5/	19.8	33.5	58.2	57.6	-0.6
Year 4/	19.4	33.1	57.6	57.0	-0.6

1/ Costs and prices are weighted by monthly production. 2/ Based on farm cost converted to wholesale market value. 3/ Wholesale prices used are the 12-metro area egg price, 12-city weighted average broiler price, and a weighted average of 8-16 lb. young hens and 14-22 lb. toms in Central, Western, and Eastern Regions. 4/ Weighted average. 5/ Preliminary.

Table 25--Young chicken prices and price spreads, 1986-88

Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Av.
Cents per pound													
Farm price 1/													
1986	30.6	29.2	29.7	29.5	32.2	35.4	42.7	43.9	36.5	39.3	34.9	30.6	34.5
1987	31.1	30.1	29.1	29.6	30.0	27.6	28.1	31.6	28.5	25.2	26.4	24.6	28.5
1988	27.1												
Wholesale RTC 12-city av. 2/													
1986	51.7	49.0	50.3	50.0	54.6	58.3	69.1	69.7	61.0	61.6	57.5	50.0	56.9
1987	51.8	49.8	48.5	48.6	50.5	45.5	47.0	52.6	46.4	43.2	44.6	39.8	47.4
1988	43.9												
U.S. av. retail price													
1986	76.6	77.1	76.7	75.2	76.9	79.5	88.9	95.8	91.0	90.0	87.8	86.5	83.5
1987	82.1	83.2	80.4	79.2	78.2	77.1	75.5	78.5	79.3	79.1	75.6	73.6	78.5
Price spreads													
Retail-to-cons.													
1986	19.5	21.8	21.0	19.2	16.3	15.5	16.4	20.0	21.6	20.5	22.6	30.0	20.4
1987	24.3	26.8	25.2	25.3	21.2	25.3	21.2	20.2	33.1	30.2	25.2	26.1	25.4
1988													
1967 = 100													
Retail pr. index													
Wh. chickens													
1986	215.3	216.5	217.3	213.0	217.5	225.2	249.9	271.2	257.3	256.1	252.2	248.1	236.6
1987	245.0	243.5	236.2	231.9	231.5	228.8	225.4	233.7	235.0	231.8	223.8	220.9	232.3
1988													

1/ Live weight. 2/ Beginning May 1983, 12-city composite weighted average.

## Turkeys

### *Turkey Production To Continue Increase in 1988*

Turkey production will continue its upward trend in 1988 as 10 percent more meat is forecast to be produced. Total production

in 1987, at almost 3.9 billion pounds, was nearly 18 percent larger than the 3.27 billion pounds produced in 1986. Although first-half production in 1988 is expected to increase at nearly the same rate as during all of 1987, the rate of increase is expected to slow during the second half.

Although prices rose above costs during November and December 1987, prices during January fell below 50 cents per pound, about 12 cents below cost of production. Higher levels of pork and chicken meat are expected to negatively affect producer net returns. In addition, somewhat higher feed costs will further pinch already negative margins for most producers.

### *Poult Placements and Slaughter Weights Up*

Production during the first quarter of 1988 is forecast to rise 18 percent from a year earlier. Turkey poult placements from September

Table 26--Turkey hatchery operations, 1985-88 1/

Month	Total turkey placed 2/			Eggs in incubators first of month, changes from previous year		
	1985-86	1986-87	1987-88	1985-86	1986-87	1987-88
	-- Thousands --			-- Percent --		
Sept.	10,661	13,620	15,078	+20	+18	+20
Oct.	12,451	14,135	16,699	+8	+17	+18
Nov.	12,648	13,836	17,703	+13	+11	+21
Dec.	14,448	17,705	19,894	+17	+18	+14
Jan.	17,204	21,118	22,307	+8	+26	+10
Feb.	18,608	22,630		+13	+15	+8
Mar.	20,761	25,172		+8	+18	
Apr.	23,065	26,093		+10	+15	
May	24,337	26,552		+9	+14	
June	23,394	27,023		+10	+14	
July	22,310	26,000		+13	+18	
Aug.	16,405	19,992		+8	+22	

1/ Breakdown by breed not shown to avoid disclosing individual operations.

2/ Excludes exported poult.



Table 27--Federally inspected turkey slaughter, 1986-87

Year	Number	Average weight	Live-weight	Certi-fied RTC
	Millions	Pounds	- Million Pounds -	
1986				
I	34.2	20.41	697.5	556.1
II	45.4	19.81	898.7	717.4
III	60.5	19.66	1,189.5	938.4
IV	56.8	20.44	1,161.4	921.1
Year	196.9	20.08	3,947.0	3,133.0
1987				
I	40.9	20.67	844.4	668.3
II	55.5	19.70	1,093.2	866.8
III	69.9	19.88	1,389.4	1,099.0
IV	64.7	21.07	1,364.1	1,080.9
Year	231.0	20.33	4,691.1	3,714.9

1987 through January 1988 were 14 percent above a year ago. Average slaughter weights have been averaging 3 percent above a year ago since October 1987. Second-quarter production is expected to increase 15 percent above a year earlier. Second-half production is expected to increase only 6 percent as producers move to bring production in line with profitable prices.

#### Large Turkey Stocks Pressure Prices

Turkeys stocks at the beginning of 1988, at more than 284 million pounds, are pressuring prices and will continue to pressure prices. Stocks on January 1, 1988, were 60 percent higher than a year earlier. Turkey parts (as opposed to whole turkeys) accounted for 41 percent of beginning cold storage stocks in 1987 and 1988. Beginning of the year stocks

Table 28--Turkey prices and price spreads, 1986-88

Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Av.
Cents per pound													
Farm price 1/													
1986	35.6	36.3	36.9	38.1	40.9	45.9	49.3	50.9	51.4	53.0	51.5	43.0	44.4
1987	34.9	35.3	37.6	36.5	35.0	34.5	33.1	31.4	30.8	29.9	33.7	38.1	34.2
1988	31.8												
New York, hens 8-16 lbs 2/													
1986	60.3	61.7	63.9	64.6	67.1	73.8	77.9	80.5	81.2	83.2	80.7	71.1	72.2
1987	55.3	58.5	60.3	58.3	55.3	55.7	56.3	56.1	56.1	54.7	60.7	66.5	57.8
1988	52.6												
4-region average retail price													
1986	106.3	107.8	104.8	104.2	103.4	102.3	105.6	109.5	111.9	112.9	108.1	102.1	106.6
1987	103.6	103.2	103.0	100.4	102.8	105.1	105.8	105.1	103.3	102.6	90.0	89.3	101.2
1988													
Price spreads													
Retail-to-consumer													
1986	33.7	36.7	32.5	31.3	27.1	19.0	19.3	19.5	21.7	20.2	16.2	21.8	24.9
1987	39.8	37.4	35.4	33.4	37.3	40.1	41.1	41.8	39.0	38.3	22.0	13.5	34.9
1988													
December 1977=100													
Consumer pr. index													
1986	142.1	143.2	141.4	139.6	140.7	139.8	141.1	142.2	145.8	149.1	145.0	143.0	142.8
1987	144.2	142.0	142.5	139.5	142.1	142.3	142.7	142.1	139.3	139.0	131.8	132.2	140.0
1988													

1/ Live weight. 2/ Wholesale, ready-to-cook.

data for turkey parts first became available in 1968 when they were 12 percent of the total. Their share increased until 1985, when it peaked at 50 percent.

### *Turkey Prices To Decline in 1988*

Wholesale prices for Eastern region hen turkeys in 1988 are forecast to average 50–56 cents per pound, somewhat below the 58 cents averaged in 1987. Prices are expected to average 48–52 cents in the first quarter and 47–53 cents in the second. Prices will climb seasonally, averaging 52–58 and 54–60 cents in the third and fourth quarters, respectively.

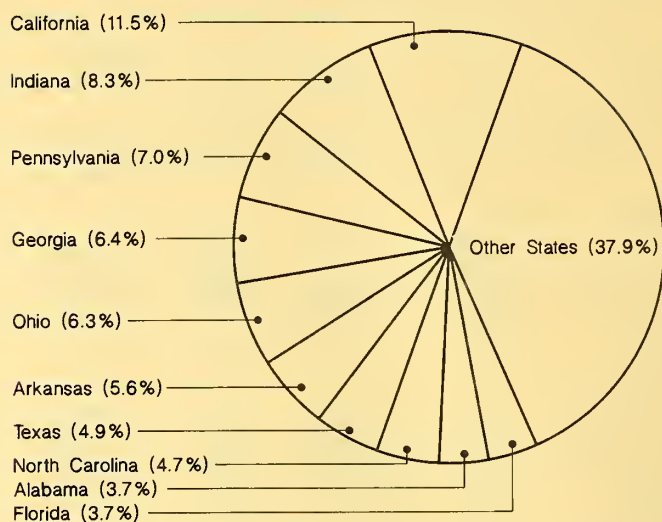
## **Eggs**

### *Egg Production Increased in 1987*

Egg production during 1987 was about 1.6 percent above the year-earlier total, due to a larger laying flock. The average number of eggs per layer was virtually unchanged in 1987 at 248.

California retained its position as the top egg-producing State with 11.5 percent of the U.S. total. The remaining "top-five" producers were Indiana (8.3 percent), Pennsylvania (7.0), Georgia (6.4), and Ohio (6.3). (See chart.) Regional egg production has changed dramatically, with sharp increases by producers in Ohio and Indiana. This has caused the proportion of egg production attributed to the East North Central region to increase from 13.9 percent of the total in 1980 to 19.2 percent in 1987.

### **California and Indiana Lead in Egg Production**



### *Egg Production To Decline in 1988*

For 1988, egg production is expected to fall less than 1 percent. First-half production is projected to be up slightly, while the second-half forecast calls for less than a 2-percent drop. The relatively low production figures projected for the third and fourth quarters are due primarily to the low or negative net returns expected for fourth-quarter 1987 through mid-1988.

As of January 1, 1988, the U.S. laying flock about equaled the year-earlier figure. Meanwhile, December placements of egg-type chicks were down 5 percent, suggesting a reduction in the egg-type laying flock by mid-1988. The laying flock (as of early 1988) appears to be getting younger, given the increased rate of light-type mature hen slaughter in November and December 1987, and a relatively constant total flock size. As pullets replace older hens, production per layer should increase, thus partially offsetting the effects of an expected smaller flock.

### *Breaking Egg Use Up in 1987*

During 1987, shell eggs broken were up nearly 10 percent from 1986. Liquid, frozen, and dried egg production posted year-to-year gains of 15, 4, and 21 percent, respectively. It appears that most of the increase in breaker activity is being used in current consumption,

Table 29--Layers on farms and eggs produced, 1986–87 1/

Quar- ters	Number of layers		Eggs per layer		Eggs produced	
	1986	1987	1986	1987	1986	1987
	- Millions -		- Number -		Million dozen	
I	280	282	60.9	61.0	1,419.8	1,434.6
II	276	280	62.7	63.1	1,443.3	1,472.1
III	272	277	62.4	62.1	1,415.3	1,432.7
IV	277	283	61.6	61.6	1,421.6	1,451.7
Annual	276	280	247.6	247.8	5,699.8	5,791.0

1/ Marketing year beginning December 1.



Table 30--Force moltings and light-type hen slaughter, 1986-88

Month	Force molted layers 1/						Light-type hens slaughtered under Federal inspection 2/ (Number of Head)		
	Being molted			Molt completed					
	1986	1987	1988	1986	1987	1988	1986	1987	1988
	- - - - Percent - - - -						- - - Thousands - - -		
January	3.6	4.2	3.8	25.2	20.9	20.9	13,890	13,004	
February	4.8	4.6		23.5	19.1		12,221	13,196	
March	4.2	3.8		24.4	20.1		14,201	13,451	
April	2.8	2.8		24.0	19.6		14,761	14,752	
May	5.4	5.4		22.1	18.8		13,277	12,871	
June	4.4	6.4		22.8	18.5		14,875	13,933	
July	5.4	4.7		21.9	20.5		12,280	12,481	
August	3.9	4.9		21.4	21.0		11,682	12,518	
September	3.9	5.3		20.8	21.7		11,185	10,814	
October	4.7	4.9		20.2	21.3		12,450	12,055	
November	4.2	4.2		20.7	21.4		10,019	11,410	
December	2.5	3.4		22.0	22.4		12,975	15,890	

1/ Percent of hens and pullets of laying age in 15 selected States. 2/ Revisions include data from late reports or other corrections developed by the Food Safety and Inspection Service.

since cold storage stocks of egg products are rising only slowly. Historically, breakers served as an outlet for both surplus eggs from the shell market and eggs that would not grade for the shell market. However, the breaking market has recently become a major outlet for table quality eggs, in addition to the traditional breaking sources.

Table 31--Egg-type chick hatchery operations, 1985-1987

Month	Hatch			Eggs in incubator first of month, changes from previous year		
	1985	1986	1987	1985	1986	1987
	- - Thousands - -			- - Percent - -		
Jan.	28,289	34,538	34,175	-20	+13	+5
Feb.	28,419	34,826	35,176	-24	+25	+4
Mar.	36,923	39,523	42,339	-23	+11	+5
Apr.	40,873	42,359	42,066	-17	+5	-2
May	38,967	42,465	41,422	-19	+8	+1
June	33,838	37,253	38,003	-26	+6	+1
July	32,094	33,575	33,461	-16	+10	-4
Aug.	32,503	33,382	35,296	-11	+4	+8
Sept.	33,568	32,638	32,495	0	+2	+4
Oct.	33,593	32,444	34,196	+7	-4	+9
Nov.	33,606	27,456	31,047	+15	-16	+10
Dec.	34,164	33,262	31,587	+25	-3	-7

### *Egg Prices Expected To Be Weak in Early 1988*

Wholesale New York grade A large egg prices averaged less than 56 cents per dozen in January, well below breakeven, and were indicative of high production rates. For the first half of the year, prices are expected to average near the January level. As production rates fall due to low or negative returns, prices are expected to strengthen in second-half 1988. Prices are expected to average between 55 and 59 cents per dozen for the first quarter and 53 to 59 cents for the second quarter. For the second half of the year, wholesale New York grade A eggs prices are forecasted to average 62 to 68 cents per dozen.

### *Per Capita Consumption Expected To Fall in 1988*

Per capita egg consumption in 1988 is expected to be 245 eggs, down about 5 from 1987. This 1988 projection is modified slightly from previous projections and uses the total U.S. population (civilian plus military). For clarification of the new computational procedure and a better understanding of the issues involved, the reader is referred to the special article, "Changes in the Supply and Utilization Series for Red Meat and Poultry," included in this issue.

Table 32--Chickens: Number on farms by classes and by regions, December 1, 1975-85 1/

Year	North Atlantic	E. North Central	W. North Central	South Atlantic	South Central	Western	Alaska and Hawaii	United States
Thousand head								
Total hens and pullets of laying age								
1975	35,821	41,168	33,754	59,842	56,923	51,256	979	279,743
1976	36,045	39,340	32,600	61,093	59,070	50,590	1,040	279,778
1977	37,117	39,925	31,870	63,090	62,545	51,099	1,031	286,677
1978	38,825	41,118	31,980	64,371	63,900	52,060	1,052	293,306
1979	39,523	40,880	31,260	67,694	62,691	51,862	1,023	294,933
1980	39,774	42,420	31,985	63,752	63,502	51,599	1,035	294,067
1981	38,636	43,300	33,000	63,077	62,747	52,070	974	293,804
1982	38,887	45,850	32,342	61,887	59,469	50,296	906	289,637
1983	36,950	45,010	31,293	58,745	55,593	49,936	990	278,517
1984	39,465	49,560	30,744	58,717	56,137	50,221	1,004	285,848
1985	38,397	50,220	29,470	56,348	56,505	47,786	1,043	279,769
1986	36,955	50,592	29,390	57,754	55,835	48,388	1,026	279,940
1987	35,717	53,420	30,815	58,509	56,387	49,695	986	285,529
Pullets 3 months old and older not of laying age								
1975	5,711	6,441	4,896	13,365	11,002	6,862	127	48,404
1976	5,793	5,449	4,976	12,278	12,364	6,829	87	47,776
1977	5,849	6,607	4,687	12,328	11,887	6,158	137	47,653
1978	6,330	6,147	4,280	13,690	11,990	6,423	132	48,992
1979	7,260	5,645	3,805	12,988	14,903	5,437	148	50,186
1980	5,350	6,085	3,824	12,796	13,083	5,869	176	47,183
1981	6,221	5,898	4,078	10,027	10,760	5,279	137	42,400
1982	5,191	5,680	3,611	9,879	10,485	5,513	120	40,479
1983	5,763	5,775	3,820	8,822	8,988	4,472	107	37,747
1984	4,557	7,340	4,164	9,424	9,054	4,335	139	39,013
1985	4,124	6,460	3,832	9,884	9,113	4,123	113	37,649
1986	4,295	5,944	3,369	10,240	18,227	6,040	110	40,225
1987	5,043	8,340	3,326	9,308	9,811	5,084	124	41,036
Pullets under 3 months old								
1975	5,220	6,595	4,185	12,051	11,348	6,700	162	46,261
1976	5,314	6,866	3,829	11,554	11,608	5,846	158	45,175
1977	5,572	6,862	4,527	11,169	11,484	6,417	160	46,191
1978	6,795	6,715	4,141	12,475	11,802	6,576	177	48,681
1979	6,372	5,958	4,008	13,008	13,313	6,229	160	49,048
1980	6,220	5,771	3,724	10,709	12,655	5,136	143	44,358
1981	5,497	5,947	4,130	10,836	11,438	4,283	167	42,298
1982	5,673	6,179	3,882	10,964	10,363	5,284	202	42,547
1983	6,594	6,185	4,460	9,022	10,521	5,434	115	42,331
1984	4,997	7,530	4,967	9,262	10,492	5,326	129	42,703
1985	4,672	8,030	3,963	10,341	11,113	6,274	119	44,512
1986	4,778	7,754	4,010	10,442	9,744	4,912	106	41,746
1987	6,097	8,375	3,285	10,630	11,194	4,781	107	44,469
Total all chickens								
1975	47,085	54,541	43,249	87,069	81,357	65,184	1,269	379,754
1976	47,488	51,962	41,760	86,898	85,329	63,638	1,286	378,361
1977	49,006	53,710	41,453	88,690	88,355	63,975	1,329	386,518
1978	52,378	54,290	40,740	92,415	90,382	65,366	1,362	396,933
1979	53,587	52,800	39,402	95,835	93,750	63,879	1,332	400,585
1980	51,762	54,570	39,875	89,489	91,932	62,948	1,355	391,931
1981	50,795	55,430	41,566	86,191	88,031	62,046	1,279	385,338
1982	50,036	58,000	40,140	84,981	83,339	61,494	1,229	379,219
1983	49,578	57,250	39,825	78,963	77,745	60,306	1,213	364,880
1984	49,358	64,730	40,135	79,594	78,625	60,303	1,263	374,008
1985	47,528	64,980	37,480	79,088	79,640	58,556	1,276	368,548
1986	46,270	64,588	37,010	81,024	79,222	59,774	1,243	369,131
1987	47,143	70,420	37,665	80,762	80,473	59,835	1,218	377,516

1/ Annual estimates cover January 1 through December 31, 1975-79 and December 1 of previous year through November 30, 1980 to date. 2/ Excludes commercial broilers.



Table 33--Shell eggs broken and egg products produced under Federal inspection, 1986-87

Period	Shell eggs broken	Egg products produced 1/		
		Liquid 2/	Frozen	Dried
	Thou. doz.	Thou. lbs.	Thou. lbs.	Thou. lbs.
1986				
January	67,415	50,206	28,122	6,574
February	61,356	46,368	24,252	6,556
March	59,034	45,856	23,221	5,429
April	74,396	55,105	30,434	7,760
May	74,076	58,477	27,510	8,529
June	78,479	61,323	30,830	7,724
July	78,719	59,815	31,381	7,229
August	74,041	56,353	28,228	7,102
September	72,314	55,668	27,516	6,578
October	80,077	61,450	32,255	8,045
November	63,605	50,759	26,584	6,481
December	73,929	54,255	31,866	8,084
Year	857,441	655,635	342,199	86,091
1987				
January	73,724	60,730	29,042	8,981
February	71,122	56,722	27,250	8,159
March	80,467	62,181	31,909	8,725
April	74,135	59,667	27,750	8,428
May	77,451	63,678	28,307	9,242
June	85,391	70,737	27,781	9,788
July	86,461	66,418	30,972	9,622
August	79,928	63,434	27,454	8,356
September	78,419	66,554	28,455	7,157
October	81,959	66,903	34,433	8,504
November	73,557	56,097	29,511	8,037
December	79,469	61,651	34,530	9,337
Year	942,083	754,772	357,394	104,363

1/ Includes ingredients added. 2/ Liquid egg products produced for immediate consumption and for processing.

Table 34--Egg prices and price spreads, 1986-88

Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Av.
Cents per dozen													
Farm price 1/													
1986	58.3	54.0	61.4	49.2	48.8	42.1	51.9	55.3	55.4	50.3	60.0	58.3	53.8
1987	51.5	50.0	46.0	46.5	40.1	41.2	41.8	40.9	51.3	41.4	46.9	38.8	44.7
1988	39.7												
New York (cartoned) 2/ Grade A, large													
1986	73.3	68.3	80.8	65.7	65.2	59.2	73.0	72.8	72.6	69.6	77.2	75.5	71.1
1987	67.1	65.2	62.0	62.4	55.6	58.7	59.1	63.2	68.3	60.2	60.5	56.9	61.6
1988													
4-region average, Grade A, large Retail price													
1986	90.1	86.6	88.7	89.0	82.0	79.5	83.3	91.3	86.8	85.5	89.7	91.0	87.0
1987	86.2	82.3	80.0	78.6	76.3	71.1	76.3	73.0	83.7	77.8	80.5	73.1	78.3
1988													
Price spreads													
Retail-to-consumer													
1986	14.9	17.2	10.0	21.9	16.8	20.5	12.1	18.8	14.3	15.4	11.7	14.4	15.7
1987	17.4	14.5	16.5	15.3	20.8	12.7	16.4	15.7	13.6	18.4	18.4	15.4	16.2
1988													
1967=100													
Consumer price index													
1986	194.4	186.7	190.8	188.8	173.7	166.9	175.2	192.9	186.0	186.2	195.8	198.6	186.3
1987	193.2	187.4	180.0	174.6	169.5	161.2	168.2	164.4	187.0	175.1	179.9	163.8	175.4
1988													

1/ Market (table) eggs including eggs sold retail by the producer; data not available prior to 1982.

2/ Price to volume buyers.



Table 35- Egg Supply and Utilization (Population includes Military) 1/

Year	Quarter	Pro- duction	Beginning stocks	Breaking egg use	Imports 2/	Total supply	Exports	Ship- ments	Hatching egg use 3/	Ending stocks	Consumption	
											Total	Per capita
<hr/>												
<u>Total Eggs</u>						<u>Million dozen</u>						
1985	I	1,430.5	11.1	---	2.2	1,443.8	16.8	7.8	136.1	11.0	1,272.2	64.0
	II	1,407.5	11.0	---	3.3	1,421.7	16.5	8.0	139.7	12.2	1,245.4	62.6
	III	1,407.7	12.2	---	2.3	1,422.2	18.4	6.7	133.7	13.1	1,250.4	62.7
	IV	1,442.3	13.1	---	4.9	1,460.3	19.0	8.0	138.6	10.7	1,284.0	64.2
	Year	5,688.0	11.1	---	12.7	5,711.8	70.6	30.3	548.1	10.7	5,052.0	253.4
1986	I	1,420.6	10.7	---	3.6	1,434.9	26.0	7.5	139.2	8.7	1,253.6	62.5
	II	1,417.8	8.7	---	4.0	1,430.5	22.4	5.8	145.1	11.9	1,245.4	62.0
	III	1,410.5	11.9	---	2.2	1,424.6	29.0	7.5	141.4	11.5	1,235.2	61.3
	IV	1,456.1	11.5	---	3.9	1,471.4	24.2	7.2	141.2	10.4	1,288.4	63.8
	Year	5,704.9	10.7	---	13.7	5,729.3	101.6	28.0	566.8	10.4	5,022.5	249.5
1987	I	1,440.4	10.4	---	2.6	1,453.4	23.6	7.3	147.5	11.9	1,263.1	62.4
	II	1,438.4	11.9	---	1.2	1,451.6	23.7	4.8	153.6	13.8	1,255.6	61.9
	III	1,438.5	13.8	---	1.0	1,453.3	21.5	6.1	147.8	13.5	1,264.4	62.2
	IV	1,478.4	13.5	---	0.8	1,492.7	42.4		146.4	15.0		
	Year 4/	5,795.8	10.4	---	5.6	5,811.7	111.2		595.4	15.0		
<hr/>												
<u>Shell Eggs</u>												
1985	I	1,430.5	0.9	182.7	0.9	1,249.6	6.7	7.2	136.1	0.7	1,098.9	55.3
	II	1,407.5	0.7	216.7	2.3	1,193.8	7.5	7.5	139.7	0.6	1,038.5	52.2
	III	1,407.7	0.6	214.1	1.1	1,195.2	6.5	6.4	133.7	0.7	1,048.0	52.5
	IV	1,442.3	0.7	199.1	4.3	1,248.2	6.4	7.8	138.6	0.7	1,094.7	54.7
	Year	5,688.0	0.9	812.6	8.6	4,884.9	27.1	28.9	548.1	0.7	4,280.1	214.6
1986	I	1,420.6	0.7	187.8	3.0	1,236.5	5.7	7.3	139.2	0.6	1,083.8	54.0
	II	1,417.8	0.6	227.0	3.3	1,194.7	6.9	5.5	145.1	1.1	1,036.1	51.5
	III	1,410.5	1.1	225.1	1.2	1,187.7	6.4	7.1	141.4	0.9	1,032.0	51.2
	IV	1,456.1	0.9	217.6	3.4	1,242.7	6.9	6.9	141.1	0.7	1,087.1	53.8
	Year	5,704.9	0.7	857.4	11.0	4,859.2	25.9	26.8	566.8	0.7	4,239.0	210.5
1987	I	1,440.4	0.7	225.3	1.9	1,217.7	7.1	7.0	147.5	1.0	1,055.2	52.1
	II	1,438.4	1.0	237.0	0.1	1,202.5	8.9	4.8	153.6	1.0	1,034.2	51.0
	III	1,438.5	1.0	244.8	0.1	1,194.8	8.3	6.0	147.8	1.0	1,031.7	50.8
	IV	1,478.4	1.0	235.0	0.1	1,244.5	24.3		146.4	1.0		
	Year 4/	5,795.8	0.7	942.1	2.3	4,856.6	48.6		595.4	1.0		

1/ Totals may not add due to rounding. 2/ Shell eggs and approximate shell-egg equivalent of egg products. 3/ Hatching for 1986-present calculated by the new method. 4/ Preliminary.

--- Not applicable for total egg supply and utilization.

*Broiler Exports Continue Strong*

Broiler exports during January–December 1987 were up about 33 percent from a year earlier. Value was up nearly 31 percent to \$353 million. The average export unit value, at \$.47 per pound, was practically unchanged from a year earlier. Major factors in the export increase continue to be the Export Enhancement Program (EEP), the lower exchange value of the dollar, and relatively low domestic broiler prices.

Exports to Iraq rose sharply under the EEP. Other large increases were to Hong Kong, Egypt, Canada, the Netherlands Antilles, and Spain. The EEP was the major factor in sales to Egypt, and was also important in exports to Spain's Canary Islands.

*Turkey Exports Boomed in November*

Turkey exports rose nearly 24 percent from a year earlier during January–December 1987 to 33 million pounds valued at \$16 million. The average export unit value was \$.49 a pound, down 11 percent. Exports were

Country or area	1986	1987
	1000 lbs.	
Japan	167,145	171,199
Iraq	0	128,923
Hong Kong	77,609	120,114
Egypt	55,166	55,851
Singapore	53,528	52,332
Canada	31,712	46,100
Jamaica	55,531	41,666
Mexico	29,239	27,632
Leeward-Windward Is.	22,380	23,262
Netherlands Antilles	11,458	17,944
Spain	3,590	11,217
French Pacific Is.	9,444	10,885
Saudi Arabia	4,314	4,607
Dominican Republic	2,251	3,597
Bermuda	2,295	2,772
Bahamas	2,236	2,697
Federal Rep. of Germany	7,745	2,400
Barbados	3,449	2,378
Colombia	1,919	2,226
United Arab Emirates	1,311	2,222
Taiwan	455	2,185
Fed. States of Micronesia	0	1,926
Kuwait	1,425	1,925
Marshall Islands	0	1,825
South Africa	703	1,816
Netherlands	1,921	1,679
Pacific Is. Trust Terr.	3,249	0
Other	21,954	13,669
Grand Total	566,156	751,554

$$\text{Export unit value} = \frac{\text{Total value of a commodity exported}}{\text{Total quantity of the commodity exported}}$$

The export unit value is a concept used to provide an indication of average prices received for U.S. exports. Export values are generally a free-alongside-ship (f.a.s.) value reported at the U.S. port of export and used as transaction prices. They include such costs as inland transport and insurance. The export unit value is generally a composite value reflecting shipments of all forms of a commodity during a set time period. For example, in the case of broilers, some shipments will be of whole birds, others will be of cut-up parts, etc. But if the composition of total broiler shipments doesn't change greatly from one time period to the next, the export unit value provides a valid indication of average prices and price changes.



Table 37--U.S. Turkey Exports to Major Importers,  
January-December, 1986-1987

Country or area	1986	1987
	1000 lbs.	
Federal Rep. of Germany	2,637	4,692
Canada	3,603	3,617
Taiwan	38	3,436
Egypt	5,627	2,631
Japan	2,418	2,118
Hong Kong	1,137	1,947
Mexico	1,233	1,846
Fed. States of Micronesia	0	1,243
Western Samoa	1,780	1,239
Marshall Islands	0	1,111
Jamaica	150	832
Haiti	445	738
French Pacific Is.	66	682
Leeward-Windward Is.	513	668
Bahamas	854	529
Western Africa, nec	105	506
Panama (incl. Canal Zone)	741	502
Togo	91	444
Senegal	0	434
Cameroon	0	402
Saudi Arabia	609	301
Pacific Is. Trust Terr.	1,606	0
Other	2,986	3,179
Grand Total	26,639	33,097

up significantly to Taiwan, West Germany, Canada, Mexico, and Hong Kong.

Turkey exports in November totaled 5.1 million pounds, up 40 percent from November 1986, and the highest month since July 1983. The United States became more price competitive in 1987. The average November export unit value at \$.48 a pound was down from \$.61 a year earlier. Leading turkey importers during November were Taiwan, Egypt, West Germany, and Hong Kong.

#### *Mature Chicken Exports Steady*

Mature chicken exports of 15.5 million pounds during January-December 1987, were down 5 percent from the same period a year earlier. Their value, at \$113.7 million, was up 10 percent.

Exports were up sharply to Jamaica, Egypt, the Netherlands, Japan, Hong Kong, and Spain, but down to Canada, Mexico, Leeward-Windward Islands, French Pacific Islands, and the Pacific Island Trust Territories.

Export unit values for mature chicken during January-December 1987, at \$.88 a pound, were up around 15 percent from a year earlier. This was in contrast to relatively constant unit values for broiler exports and lower values for turkeys and shell egg exports. Except for Japan, where the exchange value of the dollar fell very sharply, the increases in export unit values were associated with decreased exports of mature chicken and some changes in product mix.

Exports in November were only 600,000 pounds, the lowest month since November 1974, primarily because of sharp drops to Canada, Mexico, and the Netherlands Antilles.

#### *U.S. Egg Exports Increased in 1987*

Egg exports for January-December 1987 were 111 million dozen, 9 percent over 1986. This was the highest level since 1982, when exports were 158.2 million dozen. (See graph.) The value of total egg exports increased 9 percent, to \$88.3 million.

Table 38--U.S. Mature Chicken Exports to Major Importers, January-December, 1986-1987

Country or area	1986	1987
	1000 lbs.	
Canada	7,916	4,330
Mexico	4,218	2,881
Jamaica	146	2,200
Egypt	107	1,845
Netherlands	28	841
Japan	426	832
Hong Kong	173	469
Bahamas	385	417
Spain	0	340
Netherlands Antilles	199	277
French Pacific Is.	448	225
Haiti	73	96
Fed. States of Micronesia	0	94
Leeward-Windward Is.	532	93
Saudi Arabia	43	75
Panama (incl. Canal Zone)	5	74
Taiwan	3	51
United Arab Emirates	23	49
Singapore	0	46
Marshall Is.	0	44
Jordan	0	43
Western Africa, nec	0	31
Federal Rep. of Germany	0	27
Pacific Is. Trust Terr.	1,103	0
Other	496	120
Grand Total	16,324	15,500

Shell egg exports for 1987 increased 87 percent in volume to 48.6 million dozen and 29 percent in value to \$51.2 million. The EEP was an important factor behind shell egg shipment increases to Iraq, Hong Kong, the Dominican Republic, and the United Arab Emirates. Relatively low-priced eggs in the United States and the lower-valued dollar also contributed to the higher exports and are expected to contribute to higher exports in 1988. The export unit values for shell eggs declined.

Total shell egg exports in November jumped to 11.1 million dozen, the highest monthly total since the November 1982 record of 16 million dozen. Exports of 7.44 million dozen to Iraq in November under the EEP were the primary cause.

### *Egg Product Exports Down*

In contrast to shell eggs, U.S. exports of egg products were down 17 percent in volume (in shell equivalents) and down 11 percent in value to \$37.2 million during January-December 1987, from a year earlier. The main reason was a 30-percent drop in U.S. egg product exports to Japan as the EC sharply increased its exports sharply with the aid of subsidies. Canada also increased egg product exports to Japan.

### *Shell Egg Imports Drop But Egg Products Rise*

Imports of shell eggs fell to 27,000 dozen in November 1987, which was the lowest monthly total since 15,000 dozen in December 1982.

Imports of shell eggs during January-December 1987 were down 79 percent from a year earlier to 2.3 million dozen. Import unit values were up sharply. Imports from the Netherlands, the major supplier in 1986, were down 80 percent to 0.82 million dozen, second to Israel's 0.83 million dozen.

Although shell egg imports fell sharply to the lowest level since 1982, egg product imports increased nearly 20 percent from 1986 to an estimated shell equivalent of 3.2 million dozen. Canada provided about 90 percent of the egg product imports, but increases also

came from Italy and West Germany. The value of all imported eggs was estimated down 22 percent from 1986 to about \$4.4 million.

Table 39--U.S. Egg Exports (1000 dozens) to Major Importers, January-December, 1986-1987 /1

Country or Area	1986	1987
Japan	67,121	48,064
Canada	13,015	15,409
Iraq	0	12,650
Hong Kong	6,258	10,188
Federal Rep of Germany	866	2,174
Trinidad-Tobago	2,082	2,165
Jamaica	1,101	2,061
Mexico	1,824	1,995
Dominican Republic	609	1,897
United Kingdom	685	1,771
Switzerland	868	1,697
Haiti	1,099	1,275
Denmark	34	1,143
S. Korea	525	715
Peru	842	708
Suriname	622	685
United Arab Emirates	0	611
Barbados	352	610
Venezuela	169	596
Singapore	197	525
Panama (inc. Canal Zone)	286	487
Philippines	119	356
Austria	302	327
Colombia	161	300
Guyana	220	254
Bermuda	75	252
Leeward-Windward Is.	123	199
Netherlands	45	194
Netherlands Antilles	168	166
Pacific Is (Trust Terr)	313	0
Other	2,924	3,448
Grand Total	101,598	111,230

1/ Shell, and shell equivalent of egg products.

### **U.S. Egg Trade**



1987 preliminary. Includes shell eggs and shell equivalent of egg production.



Table 40--Red meat supply and utilization, carcass and retail weight 1/

Year	Production		Begin- ning stocks	Im- ports	Total supply	Ex- ports	Ship- ments	Ending stocks	Total disap- pearance	Per capita		Popul- ation
	Commer- cial	Farm								Carcass weight	Retail weight	
Million pounds												
Pounds												
Million												
Beef:												
1986												
I	5769	55	420	502	6745	102	13	395	6236	25.9	18.9	240.7
II	6246	24	395	482	7147	83	12	427	6626	27.5	20.1	241.2
III	6273	24	427	640	7364	144	14	385	6820	28.2	20.6	241.8
IV	5925	55	385	505	6871	193	13	412	6253	25.8	18.8	242.4
Year	24213	158	420	2129	26919	521	52	411	25936	107.4	78.4	241.6
1987												
I	5756	55	411	543	6765	127	14	411	6214	25.6	18.7	242.9
II	5737	24	411	627	6799	136	13	337	6314	25.9	18.9	243.4
III	6063	24	337	681	7105	159	14	381	6551	26.9	19.6	243.9
IV	5852	55	381	418	6706	183	16	384	6124	25.1	18.3	244.5
Year 2/	23408	158	411	2269	26246	604	56	384	25202	103.4	75.5	243.8
1988 2/												
Year	22350	158	287	2275	25070	500	60	325	24185	98.3	71.8	246.0
Pork:												
1986												
I	3570	23	289	279	4162	16	33	330	3783	15.7	14.8	240.7
II	3568	10	330	247	4154	28	30	315	3781	15.7	14.8	241.2
III	3237	9	315	282	3843	15	28	244	3557	14.7	13.9	241.8
IV	3623	23	244	314	4204	27	41	248	3887	16.0	15.1	242.4
Year	13998	65	289	1122	15474	86	132	248	15008	62.1	58.6	241.6
1987												
I	3540	23	248	290	4101	19	31	286	3766	15.5	14.7	242.9
II	3325	10	286	296	3917	27	28	243	3619	14.9	14.0	243.4
III	3384	9	243	299	3935	21	33	244	3636	14.9	14.1	243.9
IV	4065	23	244	310	4642	42	13	342	4245	17.4	16.2	244.5
Year 2/	14314	65	248	1195	15822	109	105	342	15266	62.6	58.9	243.8
1988 2/												
Year	22350	158	287	2275	25070	500	60	325	24185	98.3	71.8	246.0
Veal:												
1986												
I	129	5	11	7	152	1	0	10	141	0.6	0.5	240.7
II	129	2	10	4	145	1	0	9	135	0.6	0.5	241.2
III	129	3	9	4	145	2	0	7	136	0.6	0.5	241.8
IV	122	5	7	12	146	1	0	7	137	0.6	0.5	242.4
Year	509	15	11	27	562	5	1	7	550	2.3	1.9	241.6
1987												
I	113	5	7	6	131	2	0	6	123	0.5	0.4	242.9
II	101	2	6	4	113	2	0	4	107	0.4	0.4	243.4
III	100	3	4	6	113	1	0	3	109	0.4	0.4	243.9
IV	105	5	3	24	137	2	1	5	130	0.5	0.4	244.5
Year 2/	419	15	7	24	465	7	1	5	453	1.9	1.5	243.8
1988 2/												
Year	22350	158	287	2275	25070	500	60	325	24185	98.3	71.8	246.0
Lamb:												
1986												
I	90	3	13	10	116	1	1	12	103	0.4	0.4	240.7
II	78	1	12	11	102	0	0	14	87	0.4	0.3	241.2
III	81	1	14	8	104	1	1	14	89	0.4	0.3	241.8
IV	82	2	14	12	110	0	0	13	96	0.4	0.4	242.4
Year	331	7	13	41	392	2	2	13	375	1.6	1.4	241.6
1987												
I	76	3	13	13	105	0	1	14	90	0.4	0.3	242.9
II	75	1	14	12	102	0	1	11	89	0.4	0.3	243.4
III	77	1	11	9	98	0	1	7	90	0.4	0.3	243.9
IV	80	2	7	11	100	0	0	8	92	0.4	0.3	244.5
Year 2/	308	7	13	44	372	1	2	8	361	1.5	1.3	243.8
1988 2/												
Year	320	7	8	50	385	2	1	9	373	1.5	1.3	246.0

Table 40--Red meat supply and utilization, carcass and retail weight 1/

Year	Production		Begin- ning stocks	Im- ports	Total supply	Ex- ports	Ship- ments	Ending stocks	Total disap- pearance	Per capita		Popul- ation
	Commer- cial	Farm								Carcass weight	Retail weight	
Total red meat:												
					Million pounds				Pounds		Million	
1986												
I	9558	86	733	799	11176	119	47	746	10264	42.6	34.6	240.7
II	10021	37	746	743	11547	112	42	765	10628	44.1	35.6	241.2
III	9720	37	765	934	11456	160	43	650	10602	43.9	35.2	241.8
IV	9752	85	650	843	11330	222	55	680	10374	42.8	34.8	242.4
Year	39051	245	733	3319	43348	613	187	679	41869	173.3	140.2	241.6
1987												
I	9485	86	679	851	11101	148	45	717	10192	42.0	34.1	242.9
II	9238	37	717	939	10930	165	42	595	10129	41.6	33.7	243.4
III	9624	37	595	995	11251	182	48	635	10386	42.6	34.4	243.9
IV	10102	85	635	764	11586	227	30	739	10591	43.3	35.2	244.5
Year 2/	38449	245	679	3533	42906	722	164	739	41281	169.3	137.2	243.8
1988 2/												
Year	67370	481	869	6875	75595	1502	181	984	72928	296.5	216.7	246.0



Table 41--Poultry supply and utilization

Year	Slaughter			Begin- ning stocks	Total supply	Ex- ports	Ship- ments	Ending stocks	Total disap- pearance	Per capita Retail weight	Popul- ation		
	Feder- ally Inspected	Other	Total										
Million pounds												Pounds	Million
Young chicken:													
1986													
I	3414	5	3419	27	3446	121	36	24	3265	13.6	240.7		
II	3673	14	3687	24	3711	135	34	23	3519	14.6	241.2		
III	3620	14	3635	23	3658	132	42	25	3459	14.3	241.8		
IV	3558	16	3575	25	3600	178	38	24	3360	13.9	242.4		
Year	14266	50	14316	27	14342	566	149	24	13603	56.3	241.6		
1987													
I	3732	18	3750	24	3774	142	39	25	3568	14.7	242.9		
II	3910	17	3926	25	3951	198	32	24	3697	15.2	243.4		
III	3966	7	3973	24	3997	223	40	28	3705	15.2	243.9		
IV	3891	13	3904	28	3932	188	35	25	3684	15.1	244.5		
Year													
2/	15498	55	15553	24	15577	752	146	25	14654	60.1	243.8		
1988 2/													
Year	16275	57	16332	25	16357	800	140	25	15392	62.6	246.0		
Other chicken:													
1986													
I	136	26	162	144	306	3	1	161	141	0.6	240.7		
II	146	27	173	161	334	4	1	157	172	0.7	241.2		
III	125	23	148	157	305	4	1	147	153	0.6	241.8		
IV	123	23	146	147	293	5	1	163	125	0.5	242.4		
Year	531	99	629	144	773	16	3	163	591	2.4	241.6		
1987													
I	133	25	157	163	320	5	1	172	143	0.6	242.9		
II	156	29	185	172	357	6	1	182	170	0.7	243.4		
III	129	24	153	182	335	3	0	166	166	0.7	243.9		
IV	135	25	159	166	325	2	1	213	108	0.4	244.5		
Year 2/	552	103	655	163	818	15	2	213	587	2.4	243.8		
1988 2/													
Year	560	104	664	213	878	4	30	160	684	2.8	246.0		
Total chicken:													
1986													
I	3550	31	3581	171	3752	124	37	184	3407	14.2	240.7		
II	3819	41	3860	184	4045	139	35	180	3691	15.3	241.2		
III	3746	37	3783	180	3963	136	42	172	3612	14.9	241.8		
IV	3681	39	3721	172	3893	183	38	187	3485	14.4	242.4		
Year	14796	149	14945	171	15116	582	152	187	14195	58.8	241.6		

Table 41--Poultry supply and utilization

Year	Slaughter			Begin- ning stocks	Total supply	Ex- ports	Ship- ments	Ending stocks	Total disap- pearance	Per capita Retail weight	Popul- ation
	Feder- ally Inspected	Other	Total								
Million pounds											
1987										Pounds	Million
I	3865	43	3908	187	4095	147	40	197	3711	15.3	242.9
II	4065	46	4111	197	4309	204	32	206	3867	15.9	243.4
III	4094	31	4125	206	4331	226	40	194	3871	15.9	243.9
IV	4026	37	4063	194	4257	191	36	238	3792	15.5	244.5
Year 2/	16050	158	16208	187	16395	767	148	238	15241	62.5	243.8
1988 2/											
Year	16835	161	16996	238	17235	804	170	185	16076	65.3	246.0
Turkeys:											
1986											
I	556	25	581	150	731	5	0	151	576	2.4	240.7
II	717	33	750	151	901	5	0	298	598	2.5	241.2
III	938	43	982	298	1280	7	1	512	760	3.1	241.8
IV	921	37	958	512	1470	10	3	178	1279	5.3	242.4
Year	3133	138	3271	150	3422	27	4	178	3212	13.3	241.6
1987											
I	668	24	692	178	871	6	0	227	638	2.6	242.9
II	867	33	900	227	1126	7	0	381	738	3.0	243.4
III	1099	41	1140	381	1521	7	0	640	874	3.6	243.9
IV	1081	42	1122	640	1763	13	4	284	1461	6.0	244.5
Year 2/	3715	140	3855	178	4033	33	5	284	3711	15.2	243.8
1988 2/											
Year	4100	181	4281	284	4565	30	4	250	4281	17.4	246.0
Total poultry:											
1986											
I	4107	56	4162	321	4483	129	37	335	3982	16.5	240.7
II	4536	74	4610	335	4945	144	35	478	4288	17.8	241.2
III	4684	81	4765	478	5243	143	43	684	4373	18.1	241.8
IV	4603	77	4679	684	5363	193	41	365	4764	19.7	242.4
Year	17929	287	18216	321	18537	609	156	365	17407	72.0	241.6
1987											
I	4533	67	4600	365	4965	153	40	424	4349	17.9	242.9
II	4932	79	5011	424	5435	211	32	587	4605	18.9	243.4
III	5193	73	5266	587	5853	232	41	835	4745	19.5	243.9
IV	5106	79	5185	835	6020	204	40	523	5253	21.5	244.5
Year 2/	19765	298	20062	365	20428	800	153	523	18952	77.7	243.8
1988 2/											
Year	20935	342	21277	522	21800	834	174	435	20357	83	246.0

Table 42--Total red meat and poultry supply and utilization, carcass and retail weight 1/

Year	Total produc- tion	Begin- ning stocks	Im- ports	Total supply	Ex- ports	Ship- ments	Ending stocks	Total disap- pearance	Per capita		Population
									Carcass weight	Retail weight	
Total red meat and poultry:											
1986						Million pounds		Pounds		Million	
I	13806	1054	799	15659	248	84	1081	14246	59.2	51.1	240.7
II	14668	1081	743	16493	256	77	1243	14916	61.8	53.4	241.2
III	14522	1243	934	16698	304	86	1334	14975	61.9	53.3	241.8
IV	14516	1334	843	16693	415	96	1045	15138	62.4	54.4	242.4
Year	57512	1054	3319	61885	1223	343	1044	59276	245.4	212.3	241.6
1987											
I	14171	1044	851	16067	301	86	1140	14540	59.9	52.0	242.9
II	14286	1140	939	16365	376	74	1181	14734	60.5	52.6	243.4
III	14927	1181	995	17103	414	88	1470	15131	62.0	53.8	243.9
IV	15372	1470	764	17606	431	70	1262	15844	64.8	56.7	244.5
Year 2/	58756	1044	3533	63334	1522	317	1262	60233	247.1	215.0	243.8
1988 2/											
Year	89128	1391	6875	97394	2336	355	1419	93285	379.2	299.4	246.0



Table 43--Selected price statistics for meat animals and meat, 1987/88

Item														
Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.			
Dollars per cwt														
Slaughter Steers:														
Omaha														
Choice, 1000-1100 lb	61.02	61.59	66.30	70.66	68.83	65.80	64.50	64.81	64.81	64.20	63.93	65.00		
Select, 1000-1100 lb	55.23	56.40	59.35	62.62	61.27	58.40	58.21	59.38	59.90	59.50	59.25	63.14		
California														
Choice, 1000-1100 lb	63.45	64.28	68.35	70.47	69.06	65.80	66.38	66.90	65.94	65.88	65.15	65.58		
Colorado														
Choice, 1000-1100 lb	63.62	64.80	69.91	71.95	70.01	65.74	65.16	66.41	66.94	66.87	65.48	66.48		
Texas														
Choice, 1000-1100 lb	64.09	65.26	70.39	71.80	69.96	65.70	65.12	66.46	67.00	67.09	66.12	67.30		
Slaughter heifers:														
Omaha														
Choice, 1100-1200 lb	60.74	61.58	65.99	70.12	69.42	65.69	64.19	64.31	64.43	63.79	63.63	65.07		
Select, 900-1000 lb	56.08	56.83	61.48	64.86	63.42	61.12	60.58	61.08	61.13	60.63	60.22	62.13		
Cows:														
Omaha														
Commercial	43.07	45.81	44.37	44.05	43.31	45.25	46.97	47.83	46.25	44.56	46.20	45.09		
Breaking Utility	42.29	45.01	44.23	44.36	44.72	45.64	46.35	47.62	46.41	44.83	46.69	45.90		
Boning Utility	35.02	37.61	38.00	37.95	38.17	40.36	41.23	41.79	40.25	38.97	41.30	47.83		
Cutter	40.24	42.91	42.33	42.85	43.14	44.60	45.30	45.42	44.52	42.93	45.31	46.52		
Vealers:														
Choice, So. St. Paul	68.28	70.00	75.00	90.00	90.63	77.50	79.22	80.25	82.50	82.50	83.00	86.88		
Feeder steers: 1/														
Kansas City														
Medium No. 1,														
400-500 lb	76.38	79.38	81.20	83.06	84.33	87.33	88.13	92.40	87.75	89.33	87.30	94.25		
600-700 lb	71.38	71.13	72.90	73.38	74.00	76.20	79.38	81.50	77.00	79.50	78.90	85.00		
All weights and grades	69.01	68.47	70.56	70.53	70.21	71.22	75.31	77.10	73.21	74.92	73.69	80.26		
Amarillo														
Medium No. 1,														
600-700 lb	70.31	70.56	71.48	69.63	71.19	75.18	77.38	80.90	75.63	73.84	74.75	80.22		
Georgia Auctions														
Medium No. 1,														
600-700 lb	65.88	66.75	67.20	67.25	69.25	70.13	72.75	75.60	70.63	72.13	71.67	77.75		
Medium No. 2,														
400-500 lb	68.38	71.50	70.50	72.63	72.00	75.63	76.75	80.40	74.00	78.50	77.33	82.88		
Feeder heifers:														
Kansas City														
Medium No. 1,														
400-500 lb	69.13	71.63	72.80	74.63	74.33	75.25	78.50	82.40	77.06	78.67	80.20	86.50		
600-700 lb	65.13	65.75	66.80	67.63	68.25	70.40	75.00	74.00	72.81	74.83	74.20	76.00		
Slaughter hogs:														
Barrows and gilts														
Omaha No. 1 & 2,														
230-240 lb	49.71	48.83	51.91	55.81	60.82	62.20	60.62	55.29	49.20	42.07	42.71	46.41		
All weights	48.68	48.15	51.55	55.39	60.70	61.72	60.50	54.63	48.97	40.57	41.35	44.61		
Sioux City	49.08	48.67	52.10	55.79	61.37	62.69	60.56	55.19	49.28	40.74	41.56	44.59		
7 markets 2/	48.73	48.22	51.85	55.58	61.08	61.85	60.35	54.72	48.75	40.65	41.14	44.43		
Sows:														
7 markets 2/	42.38	42.82	46.42	46.26	46.35	48.09	49.76	49.72	44.87	35.12	32.96	34.18		
Feeder pigs:														
No. 1 & 2, So. Mo.,														
40-50 lb (per hd.)	53.96	54.98	56.00	51.66	45.89	45.60	48.05	47.28	41.53	36.56	31.74	37.47		
Slaughter lambs:														
Choice, San Angelo	75.75	86.50	93.12	94.50	84.83	76.83	71.83	70.05	66.25	65.00	73.83	83.53		
Choice, So. St. Paul	75.80	80.60	81.88	87.73	80.45	72.34	71.65	66.86	65.23	66.30	74.49	83.88		
Ewes, Good,														
San Angelo	41.25	42.50	39.05	36.25	34.62	36.62	38.67	39.81	37.12	37.83	39.88	43.19		
So. St. Paul	20.50	20.50	20.50	20.50	19.85	19.50	19.95	21.10	22.00	22.00	22.00	25.00		
Feeder lambs:														
Choice, San Angelo	99.50	108.50	109.40	112.62	94.56	98.75	96.75	102.55	102.00	99.50	105.83	113.63		
Choice, So. St. Paul	86.93	87.50	87.58	92.10	90.40	84.49	85.00	88.00	93.00	95.63	102.08	111.00		

Continued--

Table 43--Selected price statistics for meat animals and meat, 1987/88--Continued

Item	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
Dollars per cwt												
Farm prices:												
Beef cattle	58.80	59.30	62.60	63.00	62.50	61.10	61.90	63.70	62.90	62.00	62.20	65.10
Calves	70.60	72.50	75.10	77.30	78.80	80.30	82.30	85.90	81.40	82.90	83.10	86.20
Hogs	48.20	47.40	50.80	54.40	60.30	59.60	58.60	54.30	48.90	40.60	40.30	42.70
Sheep	32.20	30.70	28.60	28.30	25.70	28.50	32.00	32.50	31.50	30.90	33.10	33.60
Lambs	76.00	80.80	86.10	90.10	83.50	78.70	76.10	76.80	71.90	65.70	72.80	81.80
Meat prices:												
Wholesale												
Central U.S. markets												
Steer beef, Choice,												
600-700 lb	91.69	92.86	100.56	107.80	105.71	99.29	95.45	96.87	96.77	95.34	94.50	97.15
Heifer beef, Choice												
500-600 lb	90.38	91.85	99.88	107.55	104.73	98.18	94.04	96.15	96.03	94.16	93.73	96.60
Cow beef, Canner												
and Cutter	80.89	84.58	82.19	82.05	84.15	84.51	85.63	86.82	83.80	83.41	88.45	88.98
Pork loins,												
14-18 lb 4/	99.40	93.25	102.21	120.77	124.38	121.73	123.50	122.66	103.49	80.35	84.70	102.43
Pork bellies,												
12-14 lb	57.81	60.02	65.79	67.21	78.44	83.62	80.46	59.74	49.39	45.86	42.60	51.82
Hams, skinned,												
14-17 lb	65.43	71.97	72.66	70.98	78.91	79.93	86.15	93.58	97.81	96.36	91.98	66.70
East Coast:												
Lamb, Choice and												
Prime, 35-45 lb	158.96	168.75	177.60	179.00	165.00	152.00	146.25	144.50	145.69	145.38	153.30	161.88
55-65 lb	151.46	161.25	167.40	173.00	162.00	148.25	141.00	137.60	134.56	129.56	144.90	156.88
West Coast:												
Steer beef, Choice,												
600-700 lb	97.38	98.75	104.90	108.75	109.44	106.00	nq	103.00	101.33	nq	nq	nq
Cents per lb												
Retail												
Beef, Choice	233.6	233.6	236.8	243.4	249.4	248.2	245.4	245.5	245.7	246.6	245.3	
Pork	185.6	181.3	178.9	183.7	187.6	193.6	196.2	196.9	194.4	189.2	185.6	
1967=100												
Price indexes: (BLS)												
Retail meats	285.3	286.4	286.9	291.8	297.1	299.8	301.0	300.7	300.2	298.4	296.4	
Beef and veal	280.7	282.7	285.8	292.6	297.6	297.7	296.2	295.1	296.3	298.3	298.1	
Pork	289.8	287.2	284.4	289.4	297.7	305.8	308.3	309.4	304.0	295.1	289.0	
Other meats	285.5	290.2	289.2	289.0	290.3	291.5	297.5	296.9	299.3	299.2	299.0	
Poultry	237.0	234.1	231.1	230.5	228.3	226.1	230.0	229.1	227.8	219.8	219.7	
Livestock-feed ratios,												
Omaha: 3/												
Beef steer-corn	44.0	41.6	42.3	40.1	38.8	41.0	44.0	42.8	41.2	38.4	36.7	36.4
Hog-corn	35.1	32.6	32.7	31.6	34.3	38.4	41.3	36.3	31.0	24.3	23.8	25.0

1/ Reflects new feeder cattle grades. 2/ St. Louis N.S.Y., Kansas City, Omaha, Sioux City, So. St. Joseph, So. St. Paul, and Indianapolis. 3/ Bushels of No. 2 yellow corn equivalent in value to 100 pounds live weight. 4/ Prior to 1984, 8-14 lb; 1984 and 1985, 14-17 lb; 1986, 14-18 lb.



Table 44--Selected marketings, slaughter, stocks, and trade for meat animals and meat, 1987

Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1,000 head												
Federally inspected:												
Slaughter												
Cattle	3,084	2,564	2,805	2,875	2,780	2,945	3,009	2,972	2,977	3,024	2,640	2,793
Steers	1,476	1,237	1,365	1,474	1,392	1,482	1,517	1,451	1,381	1,460	1,260	1,373
Heifers	970	794	862	828	825	874	889	932	1,023	929	784	836
Cows	586	484	523	517	505	531	545	532	511	573	546	535
Bulls and stags	53	49	56	57	58	58	58	56	62	62	50	49
Calves	248	225	251	215	189	214	220	202	229	233	211	242
Sheep and lambs	418	391	432	477	363	407	411	400	459	446	399	439
Hogs	6,723	5,886	6,786	6,492	5,916	5,987	6,019	6,019	6,855	7,542	7,121	7,583
Percentage sows	3.9	4.0	3.7	4.0	4.2	5.3	5.6	5.8	4.9	4.0	3.9	3.8
Pounds												
Average live wt per head												
Cattle	1,114	1,113	1,111	1,097	1,091	1,089	1,096	1,103	1,118	1,123	1,126	1,128
Calves	240	241	232	243	255	251	238	227	237	241	233	231
Sheep and lambs	118	119	122	117	117	116	118	118	120	122	122	121
Hogs	251	248	246	247	247	248	246	244	246	249	252	250
Average dressed wt												
Beef	663	663	663	654	650	650	656	662	670	677	671	670
Veal	145	147	141	146	156	152	146	137	143	146	142	142
Lamb and mutton	60	60	62	59	59	58	59	59	61	62	62	61
Pork	181	177	177	176	177	177	176	175	175	177	180	179
Million pounds												
Production												
Beef	2,038	1,693	1,851	1,874	1,800	1,908	1,966	1,959	1,988	2,038	1,766	1,865
Veal	35	32	35	31	29	32	31	27	32	33	29	34
Lamb and mutton	25	23	26	28	21	23	24	24	28	27	25	27
Pork	1,211	1,042	1,196	1,141	1,043	1,058	1,055	1,048	1,199	1,333	1,278	1,352
Commercial: 1/												
Slaughter												
Cattle	3,199	2,662	2,904	2,971	2,872	3,035	3,098	3,054	3,070	3,131	2,752	2,900
Calves	263	239	266	228	202	227	232	214	243	249	223	253
Sheep and Lambs	428	400	442	496	373	421	426	416	474	460	411	451
Hogs	6,917	6,055	6,966	6,665	6,078	6,158	6,187	6,176	7,030	7,723	7,321	7,815
Million pounds												
Production												
Beef	2,102	1,747	1,907	1,928	1,851	1,958	2,017	2,005	2,041	2,098	1,829	1,925
Veal	39	36	38	34	32	35	34	30	36	37	32	36
Lamb and mutton	25	24	27	29	22	24	25	24	28	28	25	27
Pork	1,244	1,070	1,226	1,169	1,070	1,086	1,082	1,074	1,228	1,363	1,312	1,390
Cold storage stocks: 2/												
Beef	321	306	311	312	280	253	279	269	286	307	304	287
Veal	7	7	6	6	5	4	4	4	4	4	5	5
Lamb and mutton	12	14	14	13	13	11	9	8	7	7	9	8
Pork	218	229	221	218	219	189	181	175	186	212	251	280
Total meat	598	599	596	591	559	498	516	495	523	575	613	616
Trade:												
Imports (carcass wt)												
Beef	161.3	187.3	194.3	199.4	189.6	238.1	252.5	215.1	213.3	188.5	133.9	96.0
Veal	3.2	1.5	1.4	1.4	1.4	1.1	1.4	1.2	3.5	5.5	1.9	1.1
Lamb and mutton	3.3	4.3	5.0	4.3	3.9	3.3	2.9	2.3	3.6	2.6	2.4	2.4
Pork	98.6	89.3	101.9	102.7	90.1	103.4	101.7	97.1	100.6	111.3	102.5	96.0
Exports (carcass wt)												
Beef	52.4	35.4	38.6	41.1	48.6	46.0	52.7	50.9	55.7	63.7	67.1	51.9
Veal	.5	.7	.7	.8	.5	.5	.4	.3	.4	.2	.7	1.0
Lamb and mutton	.2	.1	.1	.1	.1	.1	.1	.2	.1	.2	.1	.1
Pork	6.7	5.1	7.1	9.2	9.6	8.3	6.8	5.7	8.6	12.2	16.5	13.5

1/ Federally inspected and other commercial. 2/ End of month. Beginning January 1977, excludes beef and pork stocks in cooler.

by

R. Stillman, M. Weimar, and L. Duewer

**Abstract:** New supply and utilization data for red meat and poultry were generated to reflect several changes in reporting practices. Military purchases were added to domestic disappearance and military personnel were included in the population series. Cold storage stocks were adjusted to reflect the carcass weight equivalents of boneless and semi-boneless reporting categories for beef and pork. Only minor differences were found in per capita disappearance resulting from these changes.

**Keywords:** Supply, utilization, disappearance, consumption, beef, pork, lamb, mutton, veal, broilers, chicken, turkey, red meat, poultry, meat, eggs.

This report details recent changes in the supply and utilization tables for red meat, poultry, and eggs, that is being published beginning with this issue of *Livestock and Poultry*. Two major differences are embodied in the new format. They are the addition of military purchases to domestic consumption and total military personnel to the total population series, and slight changes in the beginning and ending stocks of beef and pork.

These changes will make the supply and utilization series more consistent with international data, and more internally consistent. In part, these changes reflect the movement by the U.S. Department of Agriculture towards an international standard. Including military purchases in the disappearance series, and military personnel in the population series, allows a better comparison of the disappearance of meats and poultry products between the United States and other countries. Cold storage stocks, a portion of which are reported in boneless beef and pork product weights, are adjusted to reflect carcass weight equivalents. These adjustments to beginning and ending stock values make them more consistent with reported carcass weight production.

These procedural changes did not greatly alter the residually derived per capita consumption. Generally, per capita disappearance (consumption) is slightly lower, reflecting the addition of military personnel to the civilian population. A large, but unknown, proportion of consumption by military

personnel was already occurring from civilian sector sources.

Cold storage stocks for beef and pork were adjusted to carcass weight values to account for the boneless and semi-boneless stocks reported in the *Cold Storage* report after 1978. Prior to 1979, cold storage stocks were not reported in boneless and semi-boneless product categories. An adjustment to beginning stocks for 1979 was made to correct for the change in reporting methods. The factors used to convert the product weights to a carcass weight are presented in table 1.

Beef cold storage data have two categories, boneless and beefcuts (1). Pork cold storage is divided into seven categories: picnics, hams, bellies, loins, spare ribs,

Table 1. Conversion Factors for Boneless to Carcass Weight Cold Storage Products 1/

Cut Type	Conversion Factor
<b>Beef:</b>	
Boneless	1.36
Beef Cuts	1.00
<b>Pork:</b>	
Picnics	1.00
Hams	1.00
Bellies	1.00
Loins	1.00
Spareribs	1.00
Trimings	1.50
Other	1.50

1/ See reference F.



trimmings, and other. Expansion factors to carcass weight are only applied to trimmings and other pork. Expanding the boneless and semi-boneless products to a carcass weight basis makes the cold storage stocks more consistent with carcass weight production.

The new data and components of the new supply and utilization series are nearly the same as the previous series. The new series are shown in tables 2 through 5. Total supply includes commercial production, farm production (for the red meats), other production (for poultry) beginning stocks, and imports. Shell egg supply also includes a reduction for breaking egg use. Utilization is comprised of exports, shipments, ending stocks, and disappearance which is reported on a total and per capita basis. Total and shell egg utilization also include eggs used for hatching. Only military purchases have been removed from utilization.

Supply data are reported by USDA's National Agricultural Statistics Service (NASS) and the Department of Commerce. Commercial production, on a carcass-weight basis, is reported by NASS in *Livestock Slaughter* (4), and *Poultry Slaughter* (5) each month. Egg production is reported in *Eggs, Chickens, and Turkeys* (3) and egg breaking use in *Egg Products* (2) each month. Import data are reported by the Department of Commerce on a product-weight basis. These product-weight categories are converted to carcass-weight and summed by products (i.e., beef, pork, etc.). The factors are reported in *Conversion Factors and Weights and Measures: For Agricultural Commodities and Their Products* (1). Beginning stocks are the previous period's ending stocks as reported by NASS in *Cold Storage* (1).

Exports and shipments are reported by the Department of Commerce. Data used in the supply and utilization tables are weighted sums of these product weight exports, similar to imports. Shipments are defined as transfers of product to U.S. territories, Puerto Rico, and the Virgin Islands. These data are excluded from supplies because the population series does not include people residing in U.S. territories. Cold storage stocks, reported by NASS, reduce disappearance by the amount carried into the next consuming period. In addition, other utilization for eggs includes eggs used for hatching which is calculated by

the Economic Research Service of the U.S. Department of Agriculture.

Domestic disappearance is the difference between total supply and other utilization. These disappearance data are commonly referred to as consumption. The information contained in this series does not account for actual human consumption and may not necessarily reflect exactly what people consume due to waste and losses incurred throughout the marketing channels. To generate the per capita disappearance data, total domestic disappearance is divided by the total population including armed forces as reported by the Bureau of the Census. Per capita disappearance is also reported on a retail weight basis. This is obtained by applying the retail conversion factors reported in (1).

The new population series used to generate the per capita data include an additional increase of about 2 million military personnel in the 1980's. The military purchases mirror the annual changes in personnel numbers in the armed forces. In the early 1970's annual military purchases ranged from 700 to 800 million pounds, with purchases currently ranging from 200 to 300 million pounds. The largest difference between the old and new total red meat and poultry per capita retail weight series is 1.6 pounds, which occurred in 1982. For each of the meat categories, beef, pork, and broilers, the largest difference was around a half pound. Differences for the other categories were less than a tenth of a pound. The overall magnitude of the changes in the series appears to be minor.

Per capita egg consumption was lower in the new series except during 1964-1972. During this period, generally associated with the Vietnam war era, per capita consumption in the new series was usually greater. The maximum increase, of 1.6 eggs, occurred in 1965, while the largest decrease, 1.4 eggs, occurred in 1984.

These changes to the supply and utilization series represent a movement towards a more international standard that includes military personnel in the population series. The adjustments in the cold storage stocks are included to reduce the bias that results from reporting boneless and

Table 2--Red meat supply and utilization, carcass and retail weight

Year	Production			Begin- ning stocks	Im- ports	Total supply	Ex- ports	Ship- ments	Ending stocks	Total disap- pearance	Per capita	
	Commer- cial	Farm	Total								Carcass weight	Retail weight
Million pounds												
Beef:											Pounds	
1960	14374	354	14728	202	760	15690	55	0	170	15465	85.6	63.3
1961	14930	370	15300	170	1021	16491	56	0	200	16235	88.4	65.4
1962	14931	368	15299	200	1414	16913	51	0	189	16673	89.4	66.1
1963	16049	379	16428	189	1651	18268	52	0	274	17942	94.8	70.2
1964	18037	391	18428	274	1068	19770	91	0	315	19364	100.9	74.7
1965	18325	374	18699	315	923	19937	91	0	260	19586	100.8	74.6
1966	19493	202	19695	260	1182	21137	83	0	307	20747	105.6	78.1
1967	19991	192	20183	307	1313	21803	88	0	275	21440	107.9	79.8
1968	20662	183	20845	275	1500	22620	88	0	296	22236	110.8	82.0
1969	20960	166	21126	296	1615	23037	82	0	353	22602	111.5	82.5
1970	21505	180	21685	353	1792	23830	101	0	338	23391	114.1	84.4
1971	21733	171	21904	338	1734	23976	117	0	366	23493	113.1	83.7
1972	22250	163	22413	366	1960	24739	114	0	367	24258	115.6	85.5
1973	21089	189	21278	367	1990	23635	144	0	448	23043	108.7	80.5
1974	22843	294	23137	448	1615	25200	115	0	402	24683	115.4	85.4
1975	23672	303	23975	402	1758	26135	110	0	350	25675	118.9	88.0
1976	25667	302	25969	350	2073	28392	88	71	464	27770	127.4	94.2
1977	24986	293	25279	464	1939	27682	98	69	316	27199	123.5	91.4
1978	24009	232	24241	316	2297	26854	160	54	405	26235	117.9	87.2
1979	21262	185	21447	534	2405	24386	167	49	459	23712	105.4	78.0
1980	21469	174	21643	459	2064	24166	173	47	433	23513	103.2	76.4
1981	22214	175	22389	433	1743	24565	216	36	336	23977	104.2	77.1
1982	22366	170	22536	336	1939	24811	250	55	388	24118	103.7	76.8
1983	23060	183	23243	388	1931	25562	272	40	429	24821	105.7	78.2
1984	23418	180	23598	429	1823	25850	330	47	472	25000	105.5	78.1
1985	23557	171	23728	472	2071	26271	328	51	420	25472	106.5	78.8
1986	24213	158	24371	420	2129	26920	521	52	412	25935	107.3	78.4 2/
Pork:												
1960	13169	736	13905	264	222	14391	164	0	170	14057	77.8	60.8
1961	12978	669	13647	170	224	14041	162	0	200	13679	74.5	58.2
1962	13364	589	13953	200	256	14409	156	0	230	14023	75.2	59.4
1963	13937	555	14492	230	262	14984	242	0	277	14465	76.4	61.1
1964	14111	486	14597	277	313	15187	254	0	284	14649	76.3	61.1
1965	12386	396	12782	284	382	13448	149	0	152	13147	67.7	55.1
1966	12599	198	12797	152	430	13379	158	0	234	12987	66.1	54.6
1967	13935	195	14130	234	440	14804	164	0	286	14354	72.2	60.0
1968	14328	188	14516	286	462	15264	208	0	256	14800	73.7	61.8
1969	14073	171	14244	256	450	14950	260	0	211	14479	71.4	60.6
1970	14500	199	14699	211	491	15401	194	0	336	14871	72.5	61.9
1971	15815	191	16006	336	496	16838	198	0	330	16310	78.5	67.9
1972	14241	181	14422	330	538	15290	236	0	214	14840	70.7	62.4
1973	13043	180	13223	214	533	13970	279	0	286	13405	63.3	57.0
1974	14100	231	14331	286	488	15105	204	0	307	14594	68.2	61.4
1975	11585	194	11779	307	439	12525	317	0	249	11959	55.4	50.5
1976	12488	200	12688	249	469	13406	316	106	212	12772	58.6	53.6
1977	13052	196	13248	212	440	13900	294	105	186	13315	60.5	55.8
1978	13209	184	13393	186	495	14074	288	134	242	13411	60.3	55.8
1979	15271	180	15451	242	499	16192	291	158	347	15397	68.4	63.4
1980	16433	184	16617	347	550	17513	252	154	433	16674	73.2	68.0
1981	15717	156	15873	433	541	16848	307	145	320	16076	69.9	64.9
1982	14121	108	14229	320	612	15161	214	151	262	14534	62.5	58.5
1983	15117	82	15199	262	699	16159	219	142	362	15436	65.7	61.9
1984	14720	92	14812	362	954	16128	164	147	348	15470	65.3	61.5
1985	14728	79	14807	348	1128	16282	128	131	289	15733	65.8	62.0
1986	13998	65	14063	289	1122	15474	86	132	248	15008	62.1	58.6

1/ Prior to 1976 Exports and Shipments are combined.

2/ The retail conversion factor for 1986 is 0.73, prior years are 0.74.



Table 2--Red meat supply and utilization, carcass and retail weight --Continued

Year	Production			Begin- ning stocks	Im- ports	Total supply	Ex- ports	Ship- ments	Ending stocks	Total disap- pearance	Per capita	
	Commer- cial	Farm	Total								Carcass weight	Retail weight
Million pounds												
Pounds												
Veal:												
1960	1025	84	1109	10	15	1134	2	0	14	1118	6.2	5.1
1961	960	84	1044	14	16	1074	2	0	11	1061	5.8	4.7
1962	936	80	1016	11	26	1053	2	0	13	1038	5.6	4.6
1963	847	81	928	13	26	967	2	0	13	952	5.0	4.1
1964	928	85	1013	13	17	1043	5	0	13	1025	5.3	4.4
1965	936	85	1021	13	19	1053	6	0	10	1037	5.3	4.4
1966	862	48	910	10	22	942	5	0	11	926	4.7	3.9
1967	749	43	792	11	15	818	6	0	12	800	4.0	3.3
1968	696	39	735	12	18	765	6	0	7	752	3.7	3.1
1969	640	33	673	7	25	705	5	0	10	690	3.4	2.8
1970	558	30	588	10	24	622	3	0	9	610	3.0	2.4
1971	517	30	547	9	22	578	4	0	9	565	2.7	2.2
1972	429	29	458	9	36	503	10	0	13	480	2.3	1.9
1973	325	32	357	13	31	401	8	0	12	381	1.8	1.5
1974	442	44	486	12	31	529	15	0	14	500	2.3	1.9
1975	827	46	873	14	24	911	14	0	11	886	4.1	3.4
1976	812	40	852	11	22	885	3	9	11	862	4.0	3.2
1977	793	40	833	11	24	868	5	9	11	843	3.8	3.1
1978	599	32	631	11	25	667	2	4	9	651	2.9	2.4
1979	411	24	435	9	27	471	4	2	10	455	2.0	1.7
1980	379	21	400	10	21	431	3	1	9	418	1.8	1.5
1981	414	21	435	9	18	462	5	1	9	447	1.9	1.6
1982	423	25	448	9	19	476	4	2	7	463	2.0	1.6
1983	428	25	453	7	19	479	4	1	9	465	2.0	1.6
1984	479	16	495	9	24	528	6	1	14	507	2.1	1.8
1985	499	16	515	14	20	549	4	1	11	533	2.2	1.8
1986	509	15	524	11	27	562	5	1	7	550	2.3	1.9
Lamb:												
1960	754	15	769	15	87	871	2	0	12	857	4.7	4.2
1961	818	15	833	12	101	946	2	0	18	926	5.0	4.5
1962	795	13	808	18	143	969	3	0	15	951	5.1	4.5
1963	757	12	769	15	145	929	1	0	19	909	4.8	4.3
1964	703	12	715	19	79	813	2	0	13	798	4.2	3.7
1965	639	12	651	13	72	736	4	0	12	720	3.7	3.3
1966	639	10	649	12	136	797	5	0	17	775	3.9	3.5
1967	636	10	646	17	121	784	6	0	15	763	3.8	3.4
1968	592	10	602	15	147	764	7	0	14	743	3.7	3.3
1969	540	10	550	14	153	717	6	0	16	695	3.4	3.1
1970	540	11	551	16	122	689	7	0	19	663	3.2	2.9
1971	545	11	556	19	103	678	8	0	19	651	3.1	2.8
1972	533	10	543	19	148	710	7	0	16	687	3.3	2.9
1973	502	10	512	16	53	581	6	0	15	560	2.6	2.4
1974	453	11	464	15	26	505	8	0	14	483	2.3	2.0
1975	400	11	411	14	27	452	8	0	12	432	2.0	1.8
1976	361	10	371	12	36	419	4	3	15	397	1.8	1.6
1977	340	10	350	15	23	388	5	2	10	371	1.7	1.5
1978	301	9	310	10	39	359	3	1	12	343	1.5	1.4
1979	282	9	291	12	44	347	1	2	11	333	1.5	1.3
1980	310	8	318	11	33	362	2	3	9	349	1.5	1.4
1981	328	10	338	9	31	378	2	2	11	362	1.6	1.4
1982	356	9	365	11	21	397	2	2	9	384	1.7	1.5
1983	367	8	375	9	18	402	1	2	11	387	1.6	1.5
1984	371	8	379	11	20	410	2	3	7	398	1.7	1.5
1985	352	7	359	7	37	403	1	3	13	386	1.6	1.4
1986	331	7	338	13	41	392	2	2	13	375	1.6	1.4

Table 2--Red meat supply and utilization, carcass and retail weight --Continued

Year	Production			Begin- ning stocks	Im- ports	Total supply	Ex- ports	Ship- ments	Ending stocks	Total disap- pearance	Per capita	
	Commer- cial	Farm	Total								Carcass weight	Retail weight
Million pounds												
Pounds												
Total red meat:												
1960	29322	1189	30511	491	1084	32086	223	0	366	31497	174.3	133.4
1961	29686	1138	30824	366	1362	32552	222	0	429	31901	173.7	132.8
1962	30026	1050	31076	429	1839	33344	212	0	447	32685	175.3	134.6
1963	31590	1027	32617	447	2084	35148	297	0	583	34268	181.0	139.7
1964	33779	974	34753	583	1477	36813	352	0	625	35836	186.7	143.9
1965	32286	867	33153	625	1396	35174	250	0	434	34490	177.5	137.4
1966	33593	458	34051	434	1770	36255	251	0	569	35435	180.3	140.1
1967	35311	440	35751	569	1889	38209	264	0	588	37357	187.9	146.5
1968	36278	420	36698	588	2127	39413	309	0	573	38531	191.9	150.2
1969	36213	380	36593	573	2243	39409	353	0	590	38466	189.7	149.0
1970	37103	420	37523	590	2429	40542	305	0	702	39535	192.8	151.6
1971	38610	403	39013	702	2355	42070	327	0	724	41019	197.4	156.6
1972	37453	383	37836	724	2682	41242	367	0	610	40265	191.9	152.7
1973	34959	411	35370	610	2607	38587	437	0	761	37389	176.4	141.4
1974	37838	580	38418	761	2160	41339	342	0	737	40260	188.2	150.7
1975	36484	554	37038	737	2248	40023	449	0	622	38952	180.4	143.7
1976	39328	552	39880	622	2600	43102	410	189	702	41801	191.8	152.6
1977	39171	539	39710	702	2425	42837	401	185	523	41728	189.5	151.8
1978	38118	457	38575	523	2856	41954	453	193	668	40640	182.6	146.8
1979	37226	398	37624	797	2975	41396	462	210	826	39897	177.3	144.4
1980	38591	387	38978	826	2668	42472	430	205	884	40953	179.7	147.3
1981	38673	362	39035	884	2334	42252	531	184	676	40862	177.6	145.0
1982	37266	312	37578	676	2591	40844	470	210	666	39499	169.9	138.4
1983	38972	298	39270	666	2666	42602	497	185	811	41109	175.0	143.2
1984	38988	296	39284	811	2821	42916	501	199	841	41375	174.6	142.9
1985	39136	273	39409	841	3255	43505	461	186	733	42125	176.1	144.0
1986	39051	245	39296	733	3319	43348	613	187	680	41868	173.3	140.3



Table 3--Poultry supply and utilization

Year	Slaughter			Begin- ning stocks	Total supply	Ex- ports	Ship- ments	Ending stocks	Total disap- pearance	Per capita Retail weight
	Feder- ally Inspected	Other	Total							
Million pounds										
Young chicken:										
1960	3699	635	4334	37	4371	93	9	35	4234	23.4
1961	4287	657	4944	35	4979	149	10	49	4771	26.0
1962	4361	636	4997	49	5046	173	16	42	4816	25.8
1963	4607	662	5269	42	5311	112	18	44	5137	27.1
1964	4810	634	5444	44	5488	111	22	37	5318	27.7
1965	5194	677	5872	37	5908	88	34	34	5753	29.6
1966	5604	833	6437	34	6471	91	48	56	6276	31.9
1967	5876	676	6552	56	6608	80	58	56	6414	32.3
1968	5939	714	6653	56	6709	86	58	26	6539	32.6
1969	6484	691	7175	26	7201	84	75	34	7008	34.6
1970	7161	525	7687	34	7720	94	85	52	7490	36.5
1971	7281	443	7724	52	7776	101	96	40	7539	36.3
1972	7823	323	8147	40	8187	94	104	29	7959	37.9
1973	7786	239	8025	29	8054	94	99	33	7827	36.9
1974	7917	209	8126	33	8159	115	107	37	7900	36.9
1975	7966	161	8127	37	8164	138	116	22	7888	36.5
1976	8987	80	9067	22	9090	287	127	33	8643	39.6
1977	9227	191	9418	33	9451	313	128	29	8980	40.8
1978	9883	246	10129	29	10158	331	126	20	9681	43.5
1979	10916	303	11219	20	11239	402	144	31	10662	47.4
1980	11272	81	11353	31	11384	567	155	22	10640	46.7
1981	11906	79	11985	22	12007	719	154	33	11101	48.2
1982	12039	128	12167	33	12200	501	147	22	11529	49.6
1983	12389	11	12400	22	12423	432	132	21	11838	50.4
1984	12999	18	13016	21	13038	407	145	20	12467	52.6
1985	13569	192	13762	20	13781	417	143	27	13195	55.1
1986	14266	50	14316	27	14342	566	149	24	13603	56.3
Other chicken:										
1960	372	438	810	124	934	44	7	95	787	4.4
1961	398	407	805	95	900	55	5	111	729	4.0
1962	401	391	792	111	903	50	6	82	764	4.1
1963	417	336	753	82	835	45	13	91	687	3.6
1964	436	315	751	91	841	52	19	102	668	3.5
1965	425	321	746	102	848	27	19	74	727	3.7
1966	462	298	760	74	835	17	11	107	699	3.6
1967	517	310	827	107	934	9	9	114	803	4.0
1968	450	319	769	114	882	9	8	71	794	4.0
1969	454	278	732	71	803	6	1	76	721	3.6
1970	516	262	778	76	854	3	1	111	739	3.6
1971	524	268	792	111	904	3	2	109	790	3.8
1972	518	222	740	109	849	6	2	82	759	3.6
1973	521	214	736	82	818	7	3	113	694	3.3
1974	535	254	789	113	902	9	3	138	752	3.5
1975	473	223	696	138	833	17	2	92	722	3.3
1976	491	193	684	92	776	35	2	122	618	2.8
1977	512	188	700	122	821	36	4	109	672	3.1
1978	509	156	665	109	774	30	18	82	644	2.9
1979	556	175	731	82	813	36	15	112	650	2.9
1980	551	205	756	112	867	53	6	114	694	3.0
1981	558	199	757	114	872	44	3	116	709	3.1
1982	556	189	744	116	861	23	3	113	722	3.1
1983	501	216	717	113	830	18	10	92	710	3.0
1984	515	157	672	92	763	26	2	119	616	2.6
1985	502	134	636	119	755	21	1	144	589	2.5
1986	531	99	629	144	773	16	3	163	591	2.4

Table 3--Poultry supply and utilization --Continued

Year	Slaughter			Begin- ning stocks	Total supply	Ex- ports	Ship- ments	Ending stocks	Total disap- pearance	Per capita Retail weight	
	Feder- ally Inspected	Other	Total								
Million pounds											Pounds
Turkey:											
1960	948	218	1166	149	1315	24	0	160	1131	6.3	
1961	1256	239	1495	160	1655	28	0	263	1364	7.4	
1962	1097	197	1294	263	1557	37	0	203	1317	7.1	
1963	1164	187	1350	203	1554	31	0	217	1305	6.9	
1964	1253	200	1453	217	1671	43	0	207	1420	7.4	
1965	1330	185	1515	207	1722	58	0	200	1464	7.5	
1966	1478	196	1674	200	1874	47	0	267	1560	7.9	
1967	1665	205	1870	267	2137	49	0	367	1721	8.7	
1968	1456	155	1611	367	1978	41	0	317	1620	8.1	
1969	1433	173	1606	317	1923	37	4	192	1691	8.3	
1970	1567	162	1729	192	1920	35	8	219	1659	8.1	
1971	1642	131	1772	219	1991	23	4	223	1741	8.4	
1972	1797	113	1909	223	2132	36	5	208	1882	9.0	
1973	1788	145	1933	208	2141	50	4	281	1806	8.5	
1974	1836	85	1921	281	2202	40	3	275	1884	8.8	
1975	1716	87	1803	275	2078	47	5	195	1830	8.5	
1976	1950	108	2059	195	2254	65	6	203	1979	9.1	
1977	1892	131	2023	203	2227	54	2	168	2003	9.1	
1978	1983	115	2098	168	2266	51	6	175	2034	9.1	
1979	2182	162	2344	175	2519	50	7	240	2223	9.9	
1980	2332	99	2432	240	2672	75	6	198	2392	10.5	
1981	2509	68	2577	198	2775	63	5	238	2468	10.7	
1982	2459	63	2522	238	2760	51	5	204	2501	10.8	
1983	2563	86	2649	204	2853	47	7	162	2637	11.2	
1984	2574	111	2685	162	2847	27	7	125	2688	11.3	
1985	2800	142	2942	125	3067	27	7	150	2884	12.1	
1986	3133	138	3271	150	3422	27	4	178	3212	13.3	
Total Poultry:											
1960	5020	1290	6310	310	6620	161	17	290	6152	34.0	
1961	5941	1303	7245	290	7535	232	15	423	6865	37.4	
1962	5859	1224	7083	423	7506	260	22	327	6897	37.0	
1963	6188	1184	7373	327	7700	188	31	352	7129	37.7	
1964	6499	1149	7648	352	8000	206	41	346	7406	38.6	
1965	6950	1183	8132	346	8478	173	54	308	7943	40.9	
1966	7544	1327	8872	308	9180	155	59	430	8535	43.4	
1967	8058	1191	9248	430	9679	137	67	536	8938	45.0	
1968	7845	1188	9033	536	9570	137	66	414	8952	44.6	
1969	8371	1142	9513	414	9927	126	80	302	9420	46.5	
1970	9244	949	10193	302	10495	132	93	382	9888	48.2	
1971	9447	842	10288	382	10671	126	102	372	10071	48.5	
1972	10138	659	10796	372	11168	137	111	319	10601	50.5	
1973	10095	598	10694	319	11013	151	107	428	10328	48.7	
1974	10288	549	10836	428	11264	164	113	450	10536	49.3	
1975	10155	471	10626	450	11076	202	124	310	10440	48.3	
1976	11429	381	11810	310	12120	388	134	358	11240	51.6	
1977	11632	509	12141	358	12499	403	134	307	11655	52.9	
1978	12376	516	12892	307	13198	412	150	277	12359	55.5	
1979	13653	641	14294	277	14571	488	166	382	13535	60.1	
1980	14155	385	14541	382	14923	695	167	334	13726	60.3	
1981	14973	346	15319	334	15654	826	162	388	14278	62.0	
1982	15054	380	15433	388	15821	575	155	339	14752	63.4	
1983	15453	313	15766	339	16105	497	148	275	15186	64.7	
1984	16088	286	16373	275	16648	460	153	264	15771	66.5	
1985	16871	469	17340	264	17604	465	151	321	16668	69.7	
1986	17929	287	18216	321	18537	609	156	365	17407	72.0	



Table 4 -Total red meat and poultry supply and utilization, carcass and retail weight 1/

Year	Total produc- tion	Begin- ning stocks	Im- ports	Total supply	Ex- ports	Ship- ments	Ending stocks	Total disap- pearance	Per capita		Population
									Carcass weight	Retail weight	
<hr/>											
Million pounds								Pounds		Million	
Total Red Meat and Poultry:											
1960	36821	801	1084	38706	384	17	656	37649	208.4	167.5	180.67
1961	38069	656	1362	40087	454	15	852	38766	211.0	170.2	183.69
1962	38159	852	1839	40850	472	22	774	39582	212.2	171.6	186.54
1963	39990	774	2084	42848	485	31	935	41397	218.7	177.4	189.24
1964	42401	935	1477	44813	558	41	971	43242	225.3	182.5	191.89
1965	41285	971	1396	43652	423	54	742	42433	218.3	178.2	194.30
1966	42923	742	1770	45435	406	59	999	43970	223.7	183.5	196.56
1967	44999	999	1889	47888	401	67	1124	46295	232.9	191.5	198.71
1968	45731	1124	2127	48983	446	66	987	47483	236.5	194.8	200.71
1969	46106	987	2243	49336	479	80	892	47886	236.2	195.5	202.68
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1970	47716	892	2429	51037	437	93	1084	49423	241.0	199.8	205.05
1971	49301	1084	2355	52741	453	102	1096	51090	245.9	205.1	207.66
1972	48632	1096	2682	52410	504	111	929	50866	242.4	203.2	209.90
1973	46064	929	2607	49600	588	107	1189	47717	225.1	190.1	211.91
1974	49254	1189	2160	52603	506	113	1187	50796	237.5	200.0	213.85
1975	47664	1187	2248	51099	651	124	932	49392	228.7	192.1	215.97
1976	51690	932	2600	55222	798	324	1060	53041	243.3	204.2	218.04
1977	51851	1060	2425	55336	804	319	830	53383	242.4	204.7	220.24
1978	51467	830	2856	55152	865	343	945	52999	238.1	202.4	222.59
1979	51918	1074	2975	55967	950	376	1209	53431	237.5	204.6	225.06
<hr/>											
1980	53519	1209	2668	57395	1125	372	1218	54679	240.0	207.6	227.76
1981	54354	1218	2334	57906	1356	346	1063	55141	239.6	207.0	230.14
1982	53011	1063	2591	56665	1045	365	1005	54251	233.3	201.8	232.52
1983	55036	1005	2666	58707	994	334	1085	56295	239.7	207.8	234.80
1984	55657	1085	2821	59564	961	352	1105	57146	241.1	209.5	237.00
1985	56749	1105	3255	61109	926	337	1054	58793	245.7	213.7	239.28
1986	57512	1054	3319	61885	1223	343	1045	59275	245.4	212.3	241.60

Table 5--Egg Supply and Utilization 1/

Year	Pro- duction	Beginning stocks	Breaking egg use	Imports 2/	Total supply	Ex-- ports	Ship- ments	Hatching egg use 3/	Ending stocks	Consumption	
										Total	Per capita
Million dozen											Number
Total Eggs											
1960	5,133.5	65.4	----	2.4	5,201.3	34.8	6.8	287.2	51.0	4,821.5	320.2
1961	5,201.9	51.0	----	2.5	5,255.4	31.7	8.1	301.9	47.8	4,865.9	317.9
1962	5,297.4	47.8	----	1.3	5,346.5	22.8	8.7	305.1	50.0	4,959.8	319.1
1963	5,291.7	50.0	----	1.0	5,342.7	33.0	9.4	312.9	44.0	4,943.3	313.5
1964	5,434.5	44.0	----	2.0	5,480.5	18.5	12.0	319.7	46.0	5,084.3	318.0
1965	5,463.2	46.0	----	0.4	5,509.6	21.8	16.9	336.3	41.3	5,093.2	314.6
1966	5,517.3	41.3	----	14.3	5,572.9	22.3	20.7	365.4	28.3	5,136.2	313.6
1967	5,777.3	28.3	----	3.8	5,809.5	22.6	32.3	358.4	70.5	5,325.7	321.6
1968	5,679.7	70.5	----	5.4	5,755.6	21.5	24.1	361.4	56.4	5,292.3	316.4
1969	5,628.7	56.4	----	8.7	5,693.8	18.1	22.5	389.1	33.9	5,230.2	309.7
1970	5,703.5	33.9	----	27.1	5,764.5	15.5	29.2	402.1	39.4	5,278.2	308.9
1971	5,806.2	39.4	----	9.8	5,855.4	15.1	29.6	389.5	57.9	5,363.3	309.9
1972	5,741.6	57.9	----	1.1	5,800.5	23.8	32.4	391.5	53.0	5,299.9	303.0
1973	5,501.5	53.0	----	13.1	5,567.6	23.8	25.0	391.9	33.8	5,093.2	288.4
1974	5,460.9	33.8	----	12.8	5,507.6	33.4	23.4	365.6	42.2	5,042.9	283.0
1975	5,382.2	42.2	----	5.0	5,429.4	35.2	27.0	372.1	28.2	4,966.8	276.0
1976	5,376.8	28.2	----	2.6	5,407.6	37.3	27.8	419.1	20.7	4,902.7	269.8
1977	5,407.5	20.7	----	14.2	5,442.3	66.8	23.9	427.1	23.7	4,900.8	267.0
1978	5,608.3	23.7	----	11.5	5,643.5	96.7	23.6	465.7	20.3	5,037.2	271.6
1979	5,777.1	20.3	----	9.5	5,806.9	77.8	25.8	497.5	18.9	5,186.8	276.6
1980	5,806.3	18.9	----	5.1	5,830.4	42.9	23.7	498.7	19.4	5,145.7	271.1
1981	5,824.7	19.4	----	4.7	5,848.7	34.2	22.5	506.7	17.5	5,067.8	264.2
1982	5,801.9	17.5	----	2.5	5,821.8	58.2	26.7	505.7	20.3	5,110.9	263.8
1983	5,659.3	20.3	----	23.4	5,703.0	85.8	26.6	500.0	9.3	5,081.3	259.7
1984	5,708.2	9.3	----	32.0	5,749.5	58.2	27.8	529.7	11.1	5,122.7	259.4
1985	5,688.0	11.1	----	12.7	5,711.8	70.6	30.3	548.1	10.7	5,052.0	253.4
1986	5,704.9	10.7	----	13.7	5,729.3	101.6	28.0	566.8	10.4	5,022.5	249.5
Shell Eggs											
1960	5,133.5	5.6	442.3	2.4	4,699.3	17.5	6.8	287.2	2.3	4,385.5	291.3
1961	5,201.9	2.3	482.1	2.4	4,724.5	14.7	8.1	301.9	1.2	4,398.6	287.3
1962	5,297.4	1.2	482.0	1.3	4,817.9	8.6	8.7	305.1	3.5	4,492.1	289.0
1963	5,291.7	3.5	445.7	1.0	4,850.4	17.6	9.4	312.9	2.0	4,508.5	285.9
1964	5,434.5	2.0	500.4	2.0	4,938.1	8.7	12.0	319.7	1.9	4,595.8	287.4
1965	5,463.2	1.9	477.4	0.3	4,987.9	13.8	16.9	336.3	2.6	4,618.3	285.2
1966	5,517.3	2.6	471.8	2.1	5,050.0	18.8	20.7	365.4	0.8	4,644.4	283.5
1967	5,777.3	0.8	608.7	0.6	5,170.0	20.6	32.3	358.4	2.6	4,756.2	287.2
1968	5,679.7	2.6	513.9	2.3	5,170.6	18.7	24.1	361.4	1.8	4,764.7	284.9
1969	5,628.7	1.8	486.2	1.3	5,145.5	16.8	22.5	389.1	1.5	4,715.6	279.2
1970	5,703.5	1.5	567.9	19.3	5,156.5	14.1	24.8	402.1	1.5	4,713.9	275.9
1971	5,806.2	1.5	642.1	5.0	5,170.5	12.8	25.6	389.5	1.8	4,740.8	274.0
1972	5,741.6	1.8	628.6	1.0	5,115.8	14.9	28.1	391.5	1.2	4,680.2	267.6
1973	5,501.5	1.2	547.2	13.1	4,968.6	14.8	22.4	391.9	1.0	4,538.5	257.0
1974	5,460.9	1.0	624.6	12.8	4,850.1	19.6	18.8	365.6	1.1	4,445.0	249.4
1975	5,382.2	1.1	553.1	4.9	4,835.0	22.5	23.6	372.1	0.7	4,416.1	245.4
1976	5,376.8	0.7	591.9	2.5	4,788.1	30.8	25.1	419.1	0.8	4,312.2	237.3
1977	5,407.5	0.8	686.3	14.1	4,736.1	48.1	18.8	427.1	1.2	4,240.9	231.1
1978	5,608.3	1.2	686.0	11.4	4,934.9	46.8	21.6	465.7	1.1	4,399.7	237.2
1979	5,777.1	1.1	701.3	9.4	5,086.3	42.0	23.2	497.5	1.1	4,522.5	241.1
1980	5,806.3	1.1	728.7	5.1	5,083.8	79.1	22.1	498.7	0.9	4,483.0	236.2
1981	5,824.7	0.9	731.7	4.5	5,098.4	120.1	20.0	506.7	1.0	4,450.6	232.1
1982	5,801.9	1.0	732.7	2.3	5,072.5	86.5	24.6	505.7	1.0	4,454.8	229.9
1983	5,659.3	1.0	731.9	22.2	4,950.6	29.1	25.2	500.0	0.4	4,395.9	224.7
1984	5,708.2	0.4	768.9	28.5	4,968.2	25.8	24.1	529.7	0.9	4,387.7	222.2
1985	5,688.0	0.9	812.6	8.6	4,884.9	27.1	28.9	548.1	0.7	4,280.1	214.6
1986	5,704.9	0.7	857.4	11.0	4,859.2	25.9	26.8	566.8	0.7	4,239.0	210.5

1/ Totals may not add due to rounding. 2/ Shell egg and approximate shell egg equivalent of egg products. 3/ Hatching for 1986 calculated by the new method. ---- Not applicable for total egg supply and utilization.



semi-boneless cuts at product weight rather than at carcass weight. Although there are several changes in the data calculations, there are only minor differences in the per capita disappearance data from the earlier series. For a quarterly breakout of these new series, write: Livestock, Dairy and Poultry Branch, 1301 New York Avenue, NW. Room 808, Economic Research Service, USDA, Washington, D.C. 20005.

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by

Kenneth E. Nelson and Lawrence A. Duewer\*

**Abstract:** For 1986, the carcass-to-retail conversion factor for beef was changed to 0.73 from 0.74, which had been used since 1962. The change followed a reevaluation of the conversion factor which concluded that 0.74 was reasonably accurate from 1975 through 1985. Counterbalancing effects of leaner cattle but closer fat trimming of beef cuts and a higher proportion of boneless retail cuts held the factor constant over the period. In 1986, however, the two largest retailers instituted maximum quarter-inch fat programs and other retailers soon followed. The quarter-inch trim program was the major factor in the reduction of the conversion factor for 1986. The changed conversion factor resulted in the unusual situation that carcass weight disappearance of beef increased slightly, while retail weight disappearance decreased slightly, between 1985 and 1986.

**Keywords:** Retail beef, beef consumption, conversion factors, supply and utilization.

For the year 1986, the carcass-to-retail conversion factor was changed to 0.73 from 0.74, which had been used since 1962. This factor is used in the beef supply and utilization tables in this publication.

The supply and utilization (S&U) table for beef provides the official estimate of carcass weight disappearance (commonly called consumption) of beef on a U.S. total and a per capita basis. In addition, the S&U table shows per capita consumption on a retail weight basis. A conversion factor value of .74 has been used since 1962 to reflect the weight loss of fat and bone in processing carcasses to retail cuts. The goal is to estimate the weight of beef purchased by consumers as if all the beef were purchased in the form sold by supermarkets.

Recent changes in beef cattle types, cattle feeding practices, and meat merchandising practices required that the carcass-to-retail conversion factor be reevaluated. A cooperative project between the National Academy of Sciences and the Economic Research Service, USDA, assessing

the applicability of the beef carcass-to-retail conversion factor for beef over time was recently completed.<sup>1</sup>

### *Background*

There is no primary data series that directly reports the total quantity of retail beef purchased by U.S. consumers. Specific reliable data do exist that report the carcass weight of beef produced (slaughtered), beef imported, beef exported, and beef in storage. From these data, supply and utilization tables are constructed for total carcass weight of beef disappearance. The carcass-to-retail beef conversion factor for beef is used to mathematically convert the existing data on carcass weight of beef into an estimate of the retail weight equivalent as purchased by consumers.

The retail weight series has many important uses. First, when divided by population, it provides an estimate of the average quantity of beef purchased (economic

\* Agricultural Economists in the Commodity Economics Division of the Economic Research Service, USDA.

<sup>1</sup> Nelson, Kenneth E. and Lawrence A. Duewer "Reevaluation of the Beef Carcass-to-Retail Weight Conversion Factor", USDA, ERS Project Report, To the National Academy of Sciences, February 4, 1987.



consumption) per person in the United States. It is not strictly a measure of the quantity ingested because part of the retail weight remaining is bone, trimmed fat, cooking shrink, and discard, that is never actually eaten. Per capita retail weight is used both for general information and in many types of economic analyses. Second, retail weight is used as one factor in the equation to estimate the size of expenditures, and proportion of income spent for beef, data also widely used in economic analyses. Third, the series is an input for a USDA data series used in nutrition research, "nutrients in foods available for consumption," published by the Human Nutrition Information Service.

### *Historical Examination*

Many facets of the conversion factor question were examined, including both the physical value of the conversion factor and the inherent meaning of the series. From several examined procedures, one was selected as most appropriate to estimate the carcass-to-retail conversion factor for any time period. The selected procedure is based on the following factors: (1) the distribution of yield grades of steers and heifers slaughtered; (2) the slaughter mix by classes, e.g. cows and bulls vs steers and heifers; (3) assumptions about trends in fat and bone remaining in cuts sold; and (4) the trend in the average proportion of fat in hamburger and processed beef<sup>1</sup>.

The estimated conversion factors for each year from 1975 through 1985 varied from 0.7408 to 0.7366 with a mean of 0.7382. It was concluded that 0.74 is a reasonable estimate of the conversion factor for beef for 1962 through 1985. The stability of 0.74 over this long period resulted from the coincidental counterbalancing of trends. Yield grades changed during the period (more Yield Grade 2's and fewer 4's), even though slaughter

weights increased. Lower yield grades mean less fat on the carcass. Offsetting the yield grade changes however, has been a gradual but recently increasing trend toward the sale of more boneless cuts and the sale of cuts with more of the fat trimmed off.

Acceptance of 0.74 for 1962 through 1985 does not imply that future offsetting trends will always occur. Thus, it was recommended that the procedure used to estimate the conversion factor for 1975-1985 be used each year in the future.

### *Conversion Factor Estimates for 1986 and Later*

Early in 1986 the two largest retail chains announced they were going to trim beef cuts to a maximum of 1/4 inch of outside fat. This closer trimming was both a part of the trend to reduce fat consumption and an impetus for closer trimming throughout the beef channel. Computation of the 1986 conversion factor reflected this closer trim, along with other changes, and the estimated conversion factor was 0.7276.

The conversion factor reevaluation project recommended that changes in the factor be rounded to the nearest 1/2 percent. The 1986 estimated conversion factor thus becomes 0.73. This new conversion factor value for 1986 has been incorporated in the S&U table for beef in this issue. Note that the changed conversion factor resulted in the unusual situation of carcass weight disappearance of beef increasing slightly while retail weight disappearance decreased slightly between 1985 and 1986.

The most recently calculated conversion factor will be used as the preliminary estimate for following years until required data become available to make final estimates. Therefore, 0.73 will be used for both 1987 and 1988 until the final estimate for 1987 is completed.

# INTRODUCING THE ALL FRESH BEEF RETAIL PRICE

by

Lawrence A. Duewer\*

**Abstract:** The current Choice beef retail price series does not reflect all categories of beef sold by retailers. Many retailers sell "no-roll" and other non-Choice beef and a higher proportion of ground beef than is used to calculate the Choice beef price. A new all fresh beef retail price has been developed to reflect the average price paid for fresh beef at retail. This all fresh beef retail price series is being published in addition to, and not as a replacement for, the Choice retail price series.

**Keywords:** Beef, retail price, composite beef price, all beef price.

Following the recommendations of a recent ERS report, an all fresh beef composite retail price series has been developed to reflect changes in retail marketing practices<sup>1</sup>. It was developed in response to an increase in the amount of non-Choice beef and ground beef sold at retail. The previously published Choice beef composite retail price series will be continued.

The new series is not as comprehensive as an all beef series that would include all forms of beef purchased through all kinds of market outlets. The series does not attempt to represent the value of beef in processed or value-added forms such as the beef in bologna, canned chili, or TV dinners. Nor does it include the beef in a steak dinner at a restaurant, or the ground beef at a fast food restaurant. The series focuses on fresh beef sold at retail stores because the information needed to compute an all beef price is not available.

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\*Agricultural Economist in the Commodity Economics Division of the Economics Research Service, USDA.

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<sup>1</sup> U.S. Department of Agriculture, Economic Research Service, Commodity Economics Division, *Issues and Options Related to the Reporting and Analysis of Retail Prices and Price Spreads for Beef*, ERS Staff Report No. AGES871102, January 1988.

This series is an estimate of the weighted average price paid for fresh beef by the U.S. consumer at retail. The procedures used in determining these values necessarily require a number of assumptions, some of which are subjective. Only four non-Choice and non-Prime retail beef cut prices are currently reported by the Bureau of Labor Statistics (BLS) in addition to the Choice price already used. These lower grade cuts are weighted in the same proportion as the similar Choice cuts are in the Choice series. Assumptions relative to bone-in and boneless proportions of the cuts are the same as used in the Choice series. A total of 14 cut prices from BLS are used in the new series.

Weights for Choice, non-Choice, and hamburger portions of the estimated value are determined for each quarter, using both reported and derived data. The Choice, non-Choice, and hamburger portions are used to derive weights for each BLS cut for which prices are available. The quarterly weights are then applied to each month in that same quarter the following year. The first-quarter 1986 weights are thus used to calculate preliminary January, February, and March 1987 values. After final data become available, the original all fresh beef retail prices will be revised.

The proportions of steer and heifer production, cow production, and bull and stag production are derived using federally inspected cattle slaughter and average weights



Table 1. Weights derived from 1986 data used to obtain 1987 all fresh beef retail price estimates by quarters.

Item	I	II	III	IV
Percent				
Major portion weights for:				
Non-Choice	20.3	21.2	22.4	23.0
Choice	40.3	40.3	37.6	36.9
Ground beef	39.4	38.5	40.0	40.1
Individual cut weights for:				
Ground beef				
Regular	23.6	23.1	24.0	24.1
Ground chuck	15.8	15.4	16.0	16.0
Non-Choice				
Chuck roast	6.3	6.5	6.9	7.1
Round roast	6.4	6.7	7.1	7.2
Round steak	4.6	4.8	5.0	5.2
Sirloin steak	3.0	3.2	3.4	3.5
Choice				
Chuck roast	8.1	8.1	7.5	7.4
Round roast	8.2	8.2	7.7	7.5
Rib roast	4.3	4.3	4.0	3.9
Round steak	5.9	5.9	5.5	5.4
Sirloin steak	3.9	3.9	3.7	3.6
Chuck steak	4.3	4.3	4.0	4.0
T-bone steak	2.7	2.7	2.5	2.5
Porterhouse steak	2.9	2.9	2.7	2.6

reported in *Livestock Slaughter*. Steer and heifer production is then divided into Choice and non-Choice portions using information provided by the Agricultural Marketing Service, USDA, on the percentage of all federally inspected steer and heifer slaughter that is graded. It is then assumed that 20 percent of steer and heifer production is ground into hamburger along with 80 percent of cow production, and all bull and stag production.

In addition to U.S. production, an estimate of imported beef used for hamburger is made using the percentage that imports minus exports and shipments are of total disappearance. Small adjustments are made for the portion of imports that are table cuts (6 percent assumed for 1986) and the portion of exports and shipments that are ground beef (10 percent assumed for 1986). For the first quarter of 1986, the ground beef (hamburger) portion was estimated at 39.4 percent of total fresh beef sold. This matches fairly closely with private estimates provided by major

chains in recent years. The Continuing Consumer Expenditure Survey, conducted by the BLS, indicates that 38-39 percent of all beef expenditures is for ground beef. This percentage (39.4) is more than the carcass percentage of ground beef from a Choice beef carcass. Ground beef weights are separated into regular and leaner types. This is a reflection of the trend toward a higher sales volume of leaner hamburger. Regular ground beef and ground chuck prices are both available from BLS. In 1986, 40 percent was assumed to be ground chuck and 60 percent was regular ground beef.

The graded steer and heifer production, remaining after the ground beef is removed, is assigned as the Choice portion of all beef purchases. The Choice BLS cut prices are then weighted in the same proportions as in the Choice retail price procedure. The ungraded steer and heifer production (minus ground beef) and the cow production (minus ground beef) is the non-Choice portion of beef purchases.

Estimates of the all fresh beef retail prices for 1987, obtained by applying the 1986 calculated weights by quarter (table 1), are presented in table 2. The all fresh beef retail price averaged 30 cents per pound less than the Choice retail price. The pattern of changes in the two series is similar.

Table 2. Comparison of composite retail beef prices for 1987.

Year	All fresh beef	Choice beef
Cents per pound		
1987		
January	208.1	236.6
February	205.7	233.6
March	206.5	233.6
April	211.1	236.8
May	216.4	243.4
June	218.9	249.4
July	215.6	248.2
August	214.0	245.4
September	214.5	245.5
October	213.6	245.7
November	215.9	246.6
December	214.7	245.3
Year	212.9	242.5

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## LIST OF TABLES

### Page Table

4	1	Livestock, poultry, and egg production and prices
6	2	Hay production and stocks
7	3	Commercial cattle slaughter and production
9	4	Cattle balance sheet
9	5	Heifers entering cow herd January-June and July-December
10	6	January 1 feeder cattle supply
11	7	Imports of feeder cattle, calves, and hogs from Canada and Mexico
12	8	Federally inspected cattle slaughter
13	9	13-States cattle on feed, placements, marketings, and other disappearance
10	10	7-States cattle on feed, placement, and marketings
15	11	Great Plains custom cattle feeding
16	12	Corn Belt cattle feeding
17	13	World cattle inventory
19	14	Commercial calf slaughter and production
19	15	Calf slaughter by class under Federal inspection
20	16	Sheep by classes, United States, January 1
20	17	Balance sheet for sheep and lambs, United States
21	18	Commercial sheep and lamb slaughter and production
22	19	Farrow-to-finish hog production cost and returns
23	20	Commercial hog slaughter and production
25	21	Broiler chicks hatched and pullet chicks placed in hatchery supply flocks
26	22	Broilers: Eggs set and chicks placed weekly in 12 commercial States
27	23	Federally inspected young chicken slaughter
27	24	Poultry and eggs estimated costs and returns
28	25	Young chicken prices and price spreads
28	26	Turkey hatchery operations
29	27	Federally inspected turkey slaughter
29	28	Turkey prices and price spreads
30	29	Layers on farms and eggs produced
31	30	Force moltings and light-type hen slaughter
31	31	Egg-type chick hatchery operations
32	32	Chickens: Number on farms by classes and by regions
33	33	Shell eggs broken and egg products produced under Federal inspection
34	34	Egg prices and price spreads
35	35	Eggs: Supply and utilization by quarters
36	36	U.S. young chicken exports to major importers
37	37	U.S. turkey exports to major importers
37	38	U.S. mature chicken exports to major importers
38	39	U.S. egg exports to major importers
39	40	Red meat supply and utilization by quarters, carcass and retail weight
41	41	Poultry: Supply and utilization
42	42	Red meat and poultry supply and utilization
43	43	Selected price statistics for meat animals and meat
45	44	Selected marketings, slaughter, and stock statistics for meat animals and meat